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ABSTRACT

The catalog contains descriptions of approved courses in the Los Angeles City Schools, course numbers, and amounts of high school credit that may be earned. These courses are classified into nine areas: academic, business, civic and public services, elementary and citizenship, fine arts and crafts, health, homemaking, industrial (subdivided into apprenticeship, trade and technical, and preemployment trade and technical), and music. Further provided is an overview of the general requirements of Adult Continuing Education Programs including high school diplomas, eighth-grade diplomas, Veterans Service Acts, General Education Development (G.E.D.) Testing Program for nonveterans, apprenticeship programs, certificate programs, specially funded programs, and the entrance requirements for higher education programs at the University of California, California State Colleges, and Los Angeles Community Colleges. Also included for general information is a list of community adult schools, occupational centers, and skill centers and a 10-page index. The bulk of the document consists of a listing of all courses with a brief outline of course content. (BP)

ED 099594

catalog of

AUTHORIZED SUBJECTS

for

COMMUNITY ADULT SCHOOLS AND OCCUPATIONAL CENTERS

GRADUATION REQUIREMENTS AND CURRICULA

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
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CE 002 687

LOS ANGELES CITY SCHOOLS
Division of Career and Continuing Education
Publication No. AC -100 1972 -73 Revision

2/3

This publication has been developed in accordance with the *Comprehensive Curriculum Policy* adopted by the Los Angeles City Board of Education.

APPROVED:

ABRAM FRIEDMAN
Assistant Superintendent
Division of Career and Continuing Education

JAMES B. TAYLOR
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FOREWORD

Although it has been referred to by different names, career and continuing education has been an integral part of the program of the Los Angeles City Schools for more than 80 years. During 1971-72, approximately 300,000 adults enrolled in Academic, Business, Civic and Public Services, Elementary and Citizenship Education, Fine Arts and Crafts, Health, Homemaking, Industrial Education, and Music courses. Through these courses, adults have opportunities to earn a high school diploma, to prepare for occupations, and to further their general education.

The career and continuing education program is conducted in 28 community adult schools, 5 occupational centers, and 5 skill centers through more than 900 individual classes. The flexibility to initiate new courses in response to public demand and in conjunction with recommendations of advisory councils and other organizations has been one of the chief strengths of career and continuing education in our school district.

The *Catalog of Authorized Subjects for Community Adult Schools and Occupational Centers*, 1972-73 Revision, contains descriptions of approved courses, course numbers, and amounts of high school credit that may be earned. The catalog also includes lists of general enrollment procedures, graduation requirements, certificate programs, and addresses of community adult schools and occupational and skill centers.

Each year, the Los Angeles City Board of Education may officially adopt experimental courses developed by the Division of Career and Continuing Education and also authorize the deletions of those courses which have become obsolete. New courses are identified by an "E" number until they become permanent.

ABRAM FRIEDMAN
Assistant Superintendent
Division of Career and
Continuing Education

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OBJECTIVES OF CATALOG

In a rapidly changing society, adult students continually must be informed of opportunities for self-betterment and of the options available for adult education in the greater Los Angeles area. The 1972-73 Revision of the *Catalog of Authorized Subjects for Community Adult Schools and Occupational Centers* will contribute substantially to the process of communication.

This publication is designed to help students in the planning of programs to achieve their educational goals and to assist staff members in evaluating and strengthening the instructional program. The content of this catalog reflects the variety and depth of the course offerings available to students in academic, vocational, and other types of continuing education. As the needs of individuals and society change, the catalog will be modified in accordance with the standards of the Division of Career and Continuing Education.

ROBERT W. RUPERT
Administrator, Continuing Education

GENERAL INFORMATION

OBJECTIVES OF CONTINUING EDUCATION

Public-supported continuing education is designed to provide community residents with educational opportunities for improvement of both the individual and society. The role of continuing education in the Los Angeles City Schools is to develop the knowledge, skills, and attitudes of the individual necessary to meet the immediate and future demands of modern society. Essentially, the goals are derived from instruction and experience in the following:

–Traditions and Aspirations of the American Way of Life

–History of Man

–Cultures of Man

–Institutions of Man

–Goals of Man

–Communication Between Men

Continuing education has a great challenge and responsibility to serve the individual, the family, the community, and the nation. It provides one of the vital keys to our economic and cultural development by strengthening the nation's human resources. Intensive, continuing education is necessary to accelerate the development of our society and to assure that each individual fully achieves his potential.

ORGANIZATION AND PROGRAM

Under the general supervision of the Division of Career and Continuing Education, 38 principals administer the program in given areas and serve as area directors of continuing education. Each area includes a central school and branch locations, where day and evening classes are held. Supervisors and specialists are assigned to several subject areas. Approximately 3,000 teachers staff the classrooms.

The objectives and content of the program are educationally sound and professionally guided. The program is conducted on a distinctly adult level. It includes effective counseling and guidance; scheduling of regular high school subjects leading to the high school diploma; an effective elementary education program; vocational courses; English as a Second Language and citizenship classes; courses in business education, homemaking, gerontology, and music and fine arts; an active lecture and forum program; and health and physical education.

SOURCES OF CREDIT

Five sources of credit may be applied toward earning a high school diploma in Los Angeles community adult schools and occupational centers:

1. Credits earned in other secondary schools
2. Credits granted for basic training and courses completed during military service
3. Credits allowed through the testing program of the Los Angeles City Schools
4. Credits granted upon verification of work achievement having educational value
5. Credits earned in high school correspondence courses from the University of California or United States Armed Forces Institute

WORK ACHIEVEMENT CREDIT

Credit may be obtained on the basis of verified work achievement resulting in knowledge of skills comparable to those acquired in a secondary school class. In some cases, an achievement test may be required in addition to verification of achievement. The following are basic principles upon which such credit is granted:

1. Credit for work commenced after the student's 18th birthday may be granted toward graduation requirements.
2. A person must be employed for at least one year with the same firm before his work achievement may be considered for credit; and he must spend at least 6 months at each type of work for which he requests credit.
3. Credit shall be granted on the basis of 10 semester periods per year or 5 semester periods for 6 months. No other division shall be made to account for odd months above 12.
   No credit shall be granted for work achievement in excess of 12 months if there is no change in the type of work performed. Exceptions may be made if the type of work is progressively more difficult, justifying a division into beginning and advanced courses.
4. Work achievement credit may not exceed 40 semester periods. (Journeyman level, or equivalent.)
5. Credit may be granted only for vocational experience for which wages or salary were received. A person who is self-employed and who thereby earns a livelihood shall be regarded as employed with pay.

An adult wishing to obtain work achievement credit should submit to the counselor letters signed on company stationery by his employers, verifying in detail the length of his employment and the number of months spent at each type of work for which he is seeking credit and providing descriptions of duties for each job held.

The counselor will assist in completing the necessary forms and will submit them, through the principal, to a central evaluation committee for final approval.

COUNSELING

Each community adult school and occupational center maintains its own guidance and counseling services to supplement the instructional program. Services include testing by a staff of trained counselors, transcript evaluation, and educational and vocational counseling.

Students are assisted in planning programs leading to completion of requirements for a high school diploma, for admission to trade and technical schools, and for entrance to colleges and universities. Students also receive assistance in planning training and retraining toward the development of skills needed for employment. Each service assists students in self-improvement and in selecting goals which are consistent with their interests and aptitudes.

ENTRANCE REQUIREMENTS

Any person who is 18 years of age or over may attend a community adult school or occupational center; however, students who wish to become candidates for the elementary school or high school diploma must meet certain requirements. High school graduates may attend, regardless of age.

Candidates for high school diplomas must have received an eighth-grade diploma, or its equivalent, and must have sufficient command of the English language to pursue a course of study at the secondary school level.

Under some special circumstances, minors may be admitted to community adult schools and occupational centers; e.g., married minors not attending day school; students registered and pursuing courses in continuation school; and students given special permission by the secondary and community adult school principals concerned.

Adults who seek an eighth-grade diploma are counseled for placement and instruction, regardless of previous schooling.

Credit earned in any Los Angeles community adult school may be transferred to another community adult school at the request of counselors. Students entering universities, colleges, junior colleges, or trade schools after graduation should request that transcripts of credit be sent to the new institution of their choice in time to meet the entrance deadline.

STANDARDS OF ACHIEVEMENT

Community adult schools and occupational centers use the letter marking system currently authorized by the Los Angeles City Unified School District. The marks are as follows:

A – Superior
B – Better than Average
C – Average
D – Barely Passing
Fail – Failure
Inc. – Incomplete (until date by which work must be completed)

Satisfactory scholarship must be achieved as evidenced by a high standard of progress in classwork and homework, and by the results of periodic subject tests. In addition, students must maintain a satisfactory record of attendance and citizenship in each class throughout the semester in which credit is earned. Students shall not be allowed credit for a course in which they have been present for less than 80 per cent of the class time.

CREDIT

Credit is awarded on the basis of the Carnegie unit, or its equivalent; i.e., 10 semester periods for classes scheduled for 120 hours during the year correspond to one Carnegie unit.

Credit is not awarded in units of less than 2½ semester periods; or, in other words, for classes scheduled for fewer than 30 hours during the semester.

No credit is given toward high school graduation for classes in physical education and citizenship, nor for subjects below Grade 9.

A minimum of 15 semester periods of work must be completed in residence at the community adult school or occupational center granting the diploma.

Additional credit may not be granted for repetition of a subject for which credit has previously been awarded; however, a course may be repeated for the purpose of gaining a higher mark.

A minimum of 120 semester periods must be earned in courses above Grade 9 for high school graduation.

REQUIREMENTS
OF ADULT CONTINUING EDUCATION PROGRAMS

HIGH SCHOOL DIPLOMA REQUIREMENTS

			Semester Periods
BASIC CURRICULUM			90
ENGLISH		35	
English 1–2	10		
English 3–4	10		
†Advanced Grammar and Composition	5		
(Prerequisite: 20 semester periods of English courses which include composition)			
‡English electives	10		
*SOCIAL SCIENCES		25	
United States History 1–2	10		
United States Government 1 (Civics)	5		
Choice of: United States Government 2 Contemporary American Problems and Government World Affairs and Government	5		
‡Social Science electives (Example: Economics)	5		
MATHEMATICS – SCIENCE		30	
**10th-grade mathematics or above	10		
10th-grade laboratory science or above	10		
‡Mathematics or science electives	10		
MAJOR SEQUENCE			40–50
Choice of: Academic, Fine Arts and Music, General, Business, Homemaking, Industrial, or Secretarial			
‡ELECTIVES			30–20
(Excluding physical education) Subjects selected by the student on the basis of his interest, aptitude, or occupational background.			Total 160

A minimum of 15 semester periods of credit must be completed in residence at the community adult school or occupational center granting the diploma. A minimum of 120 semester periods must be earned in courses above Grade 9. Instruction in the principles of first aid is required.

A STUDENT PLANNING TO ENTER COLLEGE SHOULD REFER TO THE ENTRANCE REQUIREMENTS OF THE COLLEGE OF HIS CHOICE.

---

†Must be taken in residence.

‡Grade 9 or above.

*Must include local and California history and government.

**9th-grade Algebra is acceptable. Bookkeeping does not meet this requirement.

ACADEMIC MAJOR

			Semester Periods
BASIC CURRICULUM			90
ENGLISH		35	
English 1–2	10		
English 3–4	10		
†Advanced Grammar and Composition	5		
(Prerequisite: 20 semester periods of English courses which include composition)			
‡English electives	10		
*SOCIAL SCIENCES		25	
United States History 1–2	10		
United States Government 1 (Civics)	5		
Choice of:	5		
United States Government 2			
Contemporary American Problems and Government			
World Affairs and Government			
‡Social Science electives (Example: Economics)	5		
MATHEMATICS – SCIENCE		30	
*10th-grade mathematics or above	10		
10th-grade laboratory science or above	10		
‡Mathematics or science electives	10		
MAJOR SEQUENCE			40
Required Courses:			
foreign language		20	
Choice of two of the following:		20	
mathematics	10		
foreign language	10		
science	10		
‡ELECTIVES			30
(Excluding physical education) Subjects selected by the student on the basis of his interest, aptitude, or occupational background.			Total 160

A minimum of 15 semester periods of credit must be completed in residence at the community adult school or occupational center granting the diploma. A minimum of 120 semester periods must be earned in courses above Grade 9. Instruction in the principles of first aid is required.

A STUDENT PLANNING TO ENTER COLLEGE SHOULD REFER TO THE ENTRANCE REQUIREMENTS OF THE COLLEGE OF HIS CHOICE.

---

†Must be taken in residence.

Grade 9 or above.

Must include local and California history and government.

th-grade Algebra is acceptable. Bookkeeping does not meet this requirement.

BUSINESS MAJOR

			Semester Periods
BASIC CURRICULUM			90
ENGLISH		35	
English 1–2	10		
English 3–4	10		
†Advanced Grammar and Composition (Prerequisite: 20 semester periods of English courses which include composition)	5		
‡English electives	10		
*SOCIAL SCIENCES		25	
United States History 1–2	10		
United States Government 1 (Civics)	5		
Choice of: United States Government 2 Contemporary American Problems and Government World Affairs and Government	5		
‡Social Science electives (Example: Economics)	5		
MATHEMATICS – SCIENCE		30	
**10th-grade mathematics or above	10		
10th-grade laboratory science or above	10		
‡Mathematics or science electives	10		

MAJOR SEQUENCE . . . 40

Required Courses: The major sequence may be completed by any course that carries credit and is listed in the *Catalog of Authorized Subjects for Community Adult Schools and Occupational Centers* in either of the following fields, so long as no fewer than 10 semester periods are completed in either field.

Distributive Occupations: Finance, Insurance, Management and Supervision, Real Estate, Merchandising, Transportation and Traffic Management, Estate Planning, General Business

Office Occupations: Accounting, Business Data Processing, Business Machines, Law, General Business, Secretarial Science, and Investments

‡ELECTIVES . . . 30

(Excluding physical education) Subjects selected by the student on the basis of his interest, aptitude, or occupational background.

Total 160

A minimum of 15 semester periods of credit must be completed in residence at the community adult school or occupational center granting the diploma. A minimum of 120 semester periods must be earned in courses above Grade 9. Instruction in the principles of first aid is required.

---

† Must be taken in residence.

‡ Grade 9 or above.

* Must include local and California history and government.

** 9th-grade Algebra is acceptable. Bookkeeping does not meet this requirement.

FINE ARTS AND MUSIC

			Semester Periods
BASIC CURRICULUM			90
ENGLISH		35	
English 1–2	10		
English 3–4	10		
†Advanced Grammar and Composition	5		
(Prerequisite: 20 semester periods of English courses which include composition)			
‡English electives	10		
*SOCIAL SCIENCES		25	
United States History 1–2	10		
United States Government 1 (Civics)	5		
Choice of: United States Government 2 Contemporary American Problems and Government World Affairs and Government	5		
‡Social Science electives (Example: Economics)	5		
MATHEMATICS – SCIENCE		30	
**10th-grade mathematics or above	10		
10th-grade laboratory science or above	10		
‡Mathematics or science electives	10		
MAJOR SEQUENCE			40
Required Courses: The major sequence may be completed by any courses that carry credit and are listed in the Music or Fine Arts section of the *Catalog of Authorized Subjects for Community Adult Schools and Occupational Centers* with no fewer than 10 semester-periods in either field.			
‡ELECTIVES			30
(Excluding physical education) Subjects selected by the student on the basis of his interest, aptitude, or occupational background.			Total 160

A minimum of 15 semester periods of credit must be completed in residence at the community adult school or occupational center granting the diploma. A minimum of 120 semester periods must be earned in courses above Grade 9. Instruction in the principles of first aid is required.

---

†Must be taken in residence.

‡Grade 9 or above.

*Must include local and California history and government.

**9th-grade Algebra is acceptable. Bookkeeping does not meet this requirement.

GENERAL MAJOR

			Semester Periods
BASIC CURRICULUM			90
ENGLISH		35	
English 1–2	10		
English 3–4	10		
†Advanced Grammar and Composition (Prerequisite: 20 semester periods of English courses which include composition)	5		
‡English electives	10		
*SOCIAL SCIENCES		25	
United States History 1–2	10		
United States Government 1 (Civics)	5		
Choice of: United States Government 2 Contemporary American Problems and Government World Affairs and Government	5		
‡Social Science electives (Example: Economics)	5		
MATHEMATICS – SCIENCE		30	
**10th-grade mathematics or above	10		
10th-grade laboratory science or above	10		
‡Mathematics or science electives	10		
MAJOR SEQUENCE Required Courses: The major sequence may be completed by any courses except English that carry credit and are listed in any two sections of the *Catalog of Authorized Subjects for Community Adult Schools and Occupational Centers* with no fewer than 10 semester periods in each field.			40
‡ELECTIVES (Excluding physical education) Subjects selected by the student on the basis of his interest, aptitude, or occupational background.			30
			Total 160

A minimum of 15 semester periods of credit must be completed in residence at the community adult school or occupational center granting the diploma. A minimum of 120 semester periods must be earned in courses above Grade 9. Instruction in the principles of first aid is required.

---

†Must be taken in residence.

‡Grade 9 or above.

*Must include local and California history and government.

**9th-grade Algebra is acceptable. Bookkeeping does not meet this requirement.

HOMEMAKING MAJOR

			Semester Periods
BASIC CURRICULUM			90
ENGLISH		35	
English 1–2	10		
English 3–4	10		
† Advanced Grammar and Composition (Prerequisite: 20 semester periods of English courses which include composition)	5		
‡English electives	10		
*SOCIAL SCIENCES		25	
United States History 1–2	10		
United States Government 1 (Civics)	5		
Choice of: United States Government 2 Contemporary American Problems and Government World Affairs and Government	5		
‡Social Science electives (Example: Economics)	5		
MATHEMATICS – SCIENCE		30	
**10th-grade mathematics or above	10		
10th-grade laboratory science or above	10		
‡Mathematics or science electives	10		
MAJOR SEQUENCE Required Courses: Any courses that carry credit and are listed in the Homemaking or Parent Education section of the *Catalog of Authorized Subjects for Community Adult Schools and Occupational Centers.*			40
‡ELECTIVES (Excluding physical education) Subjects selected by the student on the basis of his interest, aptitude, or occupational background.			30
		Total	160

A minimum of 15 semester periods of credit must be completed in residence at the community adult school or occupational center granting the diploma. A minimum of 120 semester periods must be earned in courses above Grade 9. Instruction in the principles of first aid is required.

---

†Must be taken in residence.

‡Grade 9 or above.

*Must include local and California history and government.

**9th-grade Algebra is acceptable. Bookkeeping does not meet this requirement.

INDUSTRIAL EDUCATION

			Semester Periods
BASIC CURRICULUM			90
ENGLISH		35	
English 1–2	10		
English 3–4	10		
†Advanced Grammar and Composition (Prerequisite: 20 semester periods of English courses which include composition)	5		
‡English electives	10		
*SOCIAL SCIENCES		25	
United States History 1–2	10		
United States Government 1 (Civics)	5		
Choice of: United States Government 2 Contemporary American Problems and Government World Affairs and Government	5		
‡Social Science electives (Example: Economics)	5		
MATHEMATICS – SCIENCE		30	
**10th-grade mathematics or above	10		
10th-grade laboratory science or above	10		
‡Mathematics or science electives	10		
MAJOR SEQUENCE			50
Required Courses:			
Drafting 1–2 or Drafting 1 & Blueprint Reading		10	
Industrial Mathematics 1–2 or equivalent		10	
The following courses must be selected from the Apprenticeship or Trade and Technical section of the *Catalog of Authorized Subjects for Community Adult Schools and Occupational Centers.* Six semesters in one area; or a combination of four semesters in one area and two semesters in a second; or a combination of two semesters each in three areas	30		

Aerospace
Automotive
Building Construction
Drafting and Design
Electrical and Electronics
Graphic Arts
Metal
Personal and Public Service
Supervision
Textile and Apparel
Woodworking

‡ELECTIVES			20
(Excluding physical education) Subjects selected by the student on the basis of his interest, aptitude, or occupational background.			Total 160

A minimum of 15 semester periods of credit must be completed in residence at the community adult school or occupational center granting the diploma. A minimum of 120 semester periods must be earned in courses above Grade 9. Instruction in the principles of first aid is required.

---

†Must be taken in residence.

‡Grade 9 or above.

*Must include local and California history and government.

**9th-grade Algebra is acceptable. Bookkeeping does not meet this requirement.

SECRETARIAL MAJOR

			Semester Periods
BASIC CURRICULUM			90
ENGLISH		35	
English 1–2	10		
English 3–4	10		
†Advanced Grammar and Composition	5		
(Prerequisite: 20 semester periods of English courses which include composition)			
‡English electives	10		
*SOCIAL SCIENCES		25	
United States History 1–2	10		
United States Government 1 (Civics)	5		
Choice of:	5		
United States Government 2			
Contemporary American Problems and Government			
World Affairs and Government			
‡Social Science electives (Example: Economics)	5		
MATHEMATICS – SCIENCE		30	
**10th-grade mathematics or above	10		
10th-grade laboratory science or above	10		
‡Mathematics or science electives	10		
MAJOR SEQUENCE			50
Required Courses:			
Typing 1, 2, 3, 4	20		
Shorthand 1–2	10		
Business English	5		
Business Machines	5		
Office Procedures	5		
Business Mathematics	5		
‡ELECTIVES			20
(Excluding physical education) Subjects selected by the student on the basis of his interest, aptitude, or occupational background.			Total 160

A minimum of 15 semester periods of credit must be completed in residence at the community adult school or occupational center granting the diploma. A minimum of 120 semester periods must be earned in courses above Grade 9. Instruction in the principles of first aid is required.

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† Must be taken in residence.

‡ Grade 9 or above.

* Must include local and California history and government.

**9th-grade Algebra is acceptable. Bookkeeping does not meet this requirement.

EIGHTH-GRADE DIPLOMA

Adults may become eligible to receive the eighth-grade diploma in a community adult school or occupational center by meeting the following requirements:

1. Achieving an average grade placement score of not less than 9.0 on an approved standardized test battery consisting of Language, Mathematics, and Reading.

2. Passing an examination in United States History, United States Government, and local and California history and government.

3. Completing 150 classroom hours of course work in residence, which may be earned in elementary school subjects, high school subjects, or a combination of both.

VETERANS' SERVICE ACTS

An honorably discharged United States veteran of World War II, or of the Korean Conflict, or who has served in the Armed Forces during the period up to, and including, the Vietnam Conflict, may qualify for a high school diploma by satisfying all of the following conditions:

1. Service in the Armed Forces of not less than 90 days within one of the following periods: December 7, 1941 – December 31, 1946, or from June 27, 1950 up to and including the Vietnam Conflict.

2. Complete General Education Development Tests (high school level), prepared by the American Council on Education, with an average standard score of 45 or above on the five tests in the battery, and with a standard score of 35 or above on each of the five tests in the battery.

3. Meet the requirements for 20 semester periods in United States History, United States Government, and local and California history and government.

4. Earn a minimum of 15 semester periods of class work credit in residence in the community adult school or occupational center granting the diploma.

5. File with the school counselor a full-size photostatic copy of the "Report of Separation from the Armed Forces of the United States."

G.E.D. TESTING PROGRAM FOR NON-VETERANS

REQUIREMENTS FOR HIGH SCHOOL GRADUATION

1. An adult student must earn 160 semester periods of credit as listed in the *Catalog of Authorized Subjects for Community Adult Schools and Occupational Centers* in order to receive a high school diploma. It is possible for him to earn up to one-half of these credits by successfully passing certain tests, by work achievement, or by a combination of both.

2. A maximum of 80 credits may be earned by passing the G.E.D. tests with an average standard score of 45 and a minimum score of 35 on each of the five tests in the battery. Credits may be given in those areas with a score of 45 and above; however, a student may not earn more than half the total number of credits required for graduation by any combination of tests, examinations, or work achievement credits.

3. The maximum credit allowed in each subject area tested, depending on the needs of the student, is as follows:

   English – up to 20 of the 20 required basic English credits
   Social Science – up to 5 of the 5 required social science electives, or up to 15 general elective credits**
   *Science – up to 10 of the 10 required mathematics-science electives, or up to 15 general elective credits**
   Literature – up to 5 of the 10 required English electives or up to 15 general elective credits**
   Mathematics – up to 10 of the 10 required mathematics credits and up to 10 of the 10 required mathematics-science electives

4. Students participating in this program must be at least 19 years of age during the school year in which they take the tests.

5. When necessary, students may repeat tests after 6 months for the purpose of improving their scores.

APPRENTICESHIP PROGRAMS

Apprenticeship is an organized system of training in which a person may learn a skilled trade. Successful programs are a result of the cooperation of management, labor, and state and federal apprenticeship agencies, together with the use of educational services provided by community adult schools and occupational centers. The apprentice learns manipulative skills on the job and attends classes in a community adult school or occupational center to learn the necessary theory related to his trade. In this catalog, apprenticeship courses are numbered 1000-1099. Enrollment in these classes is limited to indentured apprentices or persons working in the trade at the level of the instruction being offered in each course.

CERTIFICATE PROGRAMS

A Certificate of Proficiency issued by the Division of Adult Education certifies that a student is considered vocationally competent in a given field. It indicates that the student is prepared for employment in this area.

This certificate has the following values:

1. Indicates that the student has completed successfully a recommended sequence of courses.

2. Indicates that the student has employable skills. Proficiency tests must be passed with an acceptable score in order to receive a certificate.

3. Gives confidence to the student seeking employment because he has evidence of his vocational achievement.

4. Assists employers in evaluating job competency of prospective employees.

5. Helps the employee who is seeking retraining to concentrate on necessary skills and secure evidence of recent training and proficiency.

On the next pages are current certificate programs:

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*Does not meet the laboratory science requirement.

**The total allowable for the Social Science, Science, and Literature tests must not exceed an aggregate of 40 credits.

GENERAL OFFICE CERTIFICATE

A. Required Courses:

- Typewriting 1–3
- Bookkeeping 1
- Business English
- Business Machines
- Office Procedures

B. One of the following courses:

- Business Law
- Bookkeeping 2
- Civil Service Preparation

C. Successful performance on a proficiency examination in:

- Typewriting
- Correct English Usage
- Office Procedures

SECRETARIAL CERTIFICATE

A. Required courses:

- Typewriting 1–3
- Shorthand Theory and Dictation
- Business English
- Office Procedures
- Business Mathematics or Bookkeeping
- Business Machines

B. One of the following courses:

- Business Law
- Civil Service Preparation

C. Successful performance on a proficiency examination in:

- Typewriting
- Shorthand and Transcription
- Correct English Usage
- Office Procedures

DRAFTING CERTIFICATE PROGRAM

A Drafting Certificate is awarded after the satisfactory completion of the option selected. The student must demonstrate his proficiency in each subject by passing a written and performance test with a mark of B or better.

A. Machine Drafting Option:

  Basic Drafting 1 – 2
  Mechanical Drafting 1 – 2
  Industrial Mathematics 1 – 2
  Machine Shop 1 – 2
  Machine Drafting Detailing
  Electro-Mechanical Drafting

B. Architectural Drafting Option:

  Basic Drafting 1
  Basic Mathematics 1 – 2
  Architectural Drafting 1 – 5
  Building Codes
  *Building Construction Estimating

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*Elective

REAL ESTATE CERTIFICATE PROGRAM

The Real Estate Certificate program consists of a sequence of classes organized in cooperation with an advisory committee consisting of leaders in the real estate field and of teachers from community adult schools or occupational centers.

A. Objectives:

1. To enable real estate salesmen and brokers to improve their job competency.
2. To prepare students to enter the real estate business.
3. To provide recognition for successful completion of the program.

B. Requirements:

1. A minimum of 5 course and 220 course hours. (An additional course is required when the hours of instruction in the 5 courses do not total 220 hours.)
2. Required courses:
   - Real Estate Law 1
   - Real Estate Appraisal 1
   - Real Estate Sales
   - Real Estate Finance
3. One of the following courses is required:
   - Property Management
   - Apartment House Law & Management
   - Escrow Practices
   - Condominiums
   - Business Law
   - Sales Psychology
   - Sales Speech
   - Public Speaking
   - Bookkeeping

A Certificate in Real Estate will be awarded after successful completion of the requirements. Students must earn a mark of B or better and successfully pass a proficiency test for each required course.

SPECIALLY FUNDED PROGRAMS

In addition to its regular program, the Division of Career and Continuing Education participates in many of the important educational activities financed under the following Federal Acts:

P.L. 90–576	Vocational Education Act
P.L. 89–10	Elementary and Secondary Education Act
P.L. 87–415	Manpower Development and Training Act
P.L. 89–750	Adult Basic Education Act (1966 Amendment to E.S.E.A.)
P.L. 88–452	Economic Opportunity Act, Title II-A
P.L. 90–248	Social Security Act, 1967 Amendment

The school district recognizes the valuable educational contributions of these various specially funded programs and grants course credit for learning activities which can be evaluated in terms of high school graduation requirements.

WORK INCENTIVE PROGRAM (WIN)

Continuing education courses are offered under contract arrangements with the Bureau of Adult Education, State Department of Education. These courses supplement the regular continuing education program and provide basic education in such courses as English as a Second Language, as well as vocationally oriented training. The purpose of this program is to assist welfare recipients in developing job skills. These courses include auto mechanics, television repair, and clerical training.

PROGRAMMED INSTRUCTION

Continuous growth in the use of programmed instructional materials stems from an initial experiment at University Community Adult School during the 1962–63 school year and through subsequent trials and tests with materials in many other community adult schools and occupational centers. PI programs are listed in the Index under Programmed Instruction.

Titles of recommended programmed textbooks appear in the *List of Authorized Textbooks* and/or the Division of Career and Continuing Education's memorandum on Programmed Instruction.

Before community adult schools or occupational centers begin the courses that are identified by letters PI, the following should be considered:

A. General

Well-developed programs are objective and lend themselves favorably to fact-oriented subject matter and concept development. Increase in the availability of materials eventually will remove many limitations.

An average reading level is desirable; however, poor readers improve when using PI. A number of sight and sound programs are being developed.

Average PI motivation equals the motivation of average classroom instruction. Although initially strong, the motivation for PI instruction may wear off.

PI provides an inadequate vehicle for group interaction, which is desirable in many learning situations. Experience has revealed, however, that PI provides a factual foundation for discussions led by teachers. Widely varying educational backgrounds of adult learners necessitate a wide range of study materials to permit individualized learning. The programming process is an important component of individualized learning.

Science courses currently offered through Programmed Instruction do not meet the high school laboratory requirements.

B. Teacher

Somewhat like the family physician, the teacher diagnoses, prescribes, explains, checks, and advises each student individually. These methods involve the teacher in:

- Diagnostic pretesting to determine each learner's needs relative to his goals
- Prescribing and guiding each student in the use of those self-instructional materials and learning activities that are related to his needs
- Tutoring each student on a one-to-one basis
- Arranging for group tutorial sessions, during which two or three students engaged in similar studies work together in problem solving
- Evaluating individual progress and conducting post-tests based on each learner's prescriptions to determine when objectives are achieved

C. Student

The programming process permits the student to learn because of these unique characteristics of the method:

- He may begin his studies at any time and stop when they are completed; the learner determines how long this process takes.
- By beginning at his own level with familiar content, the student moves gradually to new concepts. Built-in questions at each step enable him to learn whether or not he "got the message."
- He confers with the teacher on a one-to-one basis at the time questions arise.
- He proceeds at his own best pace. The strong student is not held back, and the slow student is not left behind nor pushed to confusion. The student asks for his test when he feels ready.
- Absence from class does not mean that the student misses important lessons. Upon return, he begins where he stopped work, having missed time but not the lesson or material to be learned.
- Individualized learning develops the learner's independence, self-esteem, and confidence.

ENTRANCE REQUIREMENTS OF HIGHER EDUCATION PROGRAMS

UNIVERSITY OF CALIFORNIA

REQUIREMENTS FOR ADMISSION TO FRESHMAN STANDING

Graduation from high school.

Subject Requirements	**Sem.**	**Units**
United States History	2	1
English	6	3
(May include courses in Grade 9)		
Mathematics	4	2
Four semesters of college preparatory mathematics. (May include courses in Grade 9)		
Science	2	1
(10th-, 11th- or 12th-grade college preparatory laboratory science in the same subject)		
Foreign Language	4	2
(In the same language; may include courses in Grade 9.)		
Additional requirements in one of the following:	2	1
Science		
(Chemistry or Physics in addition to Science course listed above)		
Mathematics		
Foreign Language		
(Either one additional year in the above language, or two years of a different language)		
Additional elective units to complete the minimum of 15 standard entrance units are also required.		

Scholarship Requirements

An average mark of B in the six subjects listed above as "Subject Requirements" taken in Grades 10, 11, and 12. A mark of A in one course may be used to balance a C in another, but it may not compensate for a D or F.

RECOMMENDED SUBJECTS

For high school subjects recommended for a particular major to be undertaken at the University, consult the *Prerequisite and Recommended Subjects* publication of the Office of Relations with Schools of the University. Those courses that meet the above subject requirements will have letters UC following the subject number.

QUALIFICATION BY EXAMINATION

The University does not conduct entrance examinations but accepts the results of examinations administered by the Educational Testing Service for the College Entrance Examination Board. Requirements may change. For specific details, adults are referred to current University of California undergraduate admissions circulars and/or individual catalogs from the campus of the University that the student desires to attend.

TESTING

If an adult does not meet scholarship and subject requirements, he may be able to qualify for admission by examination alone. Refer to the publications mentioned above.

CALIFORNIA STATE COLLEGES

REQUIREMENTS FOR ADMISSION TO FRESHMAN STANDING

High school graduation is required, as is achievement of a minimum eligibility index established each year by the Chancellor of the State College System. This index is based on a combination of high school marks and a score on the American College Test or the Scholastic Aptitude Test.

RECOMMENDED PREPARATION

Although no course pattern is required, the high school graduate who is properly prepared to undertake a full program of college study should have as minimal preparation classes in college preparatory English, mathematics, history and/or social science, a laboratory science, a foreign language, and study in speech, music, art, and other subjects contributing to a general academic background.

For additional information, students should consult the catalogs of individual colleges. Those in the Los Angeles area are:

California State College at Los Angeles
5151 State College Drive
Los Angeles 90032

California State College at Long Beach
6101 East Seventh Street
Long Beach 90804

California State College at Dominguez Hills
809 East Victoria Street
Dominguez Hills 90247

San Fernando Valley State College
18111 Nordhoff Street
Northridge 91326

LOS ANGELES COMMUNITY COLLEGES

ADMISSION REQUIREMENTS

To be admitted to a college in the Los Angeles Community College District, an applicant must be a high school graduate, *or* must be 18 years of age or older and capable of profiting from the instruction offered.

An application for admission and a high school transcript must be filed with the individual college in advance of registration. Specific dates for filing applications are published each year.

DEGREES AND CERTIFICATES

Upon completion of graduation requirements, community college students may earn a degree of Associate in Arts or Associate in Science. The equivalent of two years of full-time college course work is required for a degree. (A student may carry less than a full-time study load in day or evening classes over a longer period if he wishes.)

Certificates are awarded upon completion of certain occupational curricula which require less than two years of study.

CURRICULA

The colleges in the Los Angeles Community College District offer two general types of curricula:

1. *Transfer programs* in which a student may complete the freshman and sophomore years of a bachelor's degree program and then take the junior and senior years at a four-year college or university.

   A student who does not qualify for admission in freshman standing in a four-year college because of high school marks or subject deficiencies may qualify for admission to advanced standing if he takes appropriate junior college courses and earns an acceptable academic record.

2. *Occupational curricula* in which students learn specific skills while increasing their general education.

   More than 300 one-year, two-year, and apprenticeship programs are offered. These include the following general occupational classifications:

   Agriculture
   Aircraft
   Apparel
   Architecture
   Art
   Automotive and Engine
   Building and Grounds Management
   Business
   Communications
   Computers
   Construction Occupations
   Cosmetology
   Culinary
   Drafting
   Education
   Electrical and Electronics
   Engineering
   Health Services
   Home Economics
   Mechanical
   Paramedical
   Personal Service
   Printing
   Public Service
   Social Services
   Technology

For additional information, students should consult the catalog and the counselors at any college in the Los Angeles Community College District. The colleges are as follows:

Los Angeles City College
855 North Vermont Avenue
Los Angeles 90029
663-9141

East Los Angeles College
5357 East Brooklyn Avenue
Los Angeles 90022
263-7261

Los Angeles Harbor College
1111 Figueroa Place
Wilmington 90744
835-0161

Los Angeles Pierce College
6201 Winnetka Avenue
Woodland Hills 91364
347-0551

Los Angeles Southwest College
11514 South Western Avenue
Los Angeles 90047
757-9251

Los Angeles Trade-Technical College
400 West Washington Boulevard
Los Angeles 90015
746-0800

Los Angeles Valley College
5800 Fulton Avenue
Van Nuys 91401
781-1200/873-4010

West Los Angeles College
4800 Freshman Drive
Culver City 90230
836-7110

Adminstrative offices of the District are located at 2140 West Olympic Boulevard, Los Angeles 90006. The telephone number is 380-6000.

SCHOOL CALENDAR, 1972–73

SUMMER SESSION, 1972

Six-Week Summer Session: June 26 to August 4

FALL SEMESTER

September 11, 1972 to January 26, 1973

First Semester Begins and School Opens	September 11
Veterans Day (Legal Holiday)	October 23
Thanksgiving Holidays	November 23 and 24
Christmas Vacation	December 18 to January 1, incl.
First Semester Ends	January 26

SPRING SEMESTER

January 29 to June 15, 1973

Second Semester Begins	January 29
Lincoln Day (Legal Holiday)	February 12
Washington Day (Legal Holiday)	February 19
Easter Vacation (School Holidays)	April 16 to 20, incl.
Memorial Day (Legal Holiday)	May 28
Second Semester Ends and School Closes	June 15

SUMMER SESSION, 1973*

Six-Week Summer Session: June 25 to August 3

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*Tentative dates subject to approval of the summer school program.

LIST OF COMMUNITY ADULT SCHOOLS, OCCUPATIONAL CENTERS, AND SKILL CENTERS

COMMUNITY ADULT SCHOOLS AND OCCUPATIONAL CENTERS

BANNING COMMUNITY ADULT SCHOOL	1500 North Avalon Boulevard Wilmington 90744	835-6684
BELMONT COMMUNITY ADULT SCHOOL	1575 West Second Street Los Angeles 90026	626-3162
BILINGUAL COMMUNITY ADULT SCHOOL	3031 Whittier Boulevard Los Angeles 90023	262-1136
CAMBRIA COMMUNITY ADULT SCHOOL	1510 Cambria Street Los Angeles 90017	483-4992
Cambria Central Branch	211 West 17th Street Los Angeles 90015	748-2187
CENTRAL CITY OCCUPATIONAL CENTER	1646 South Olive Street Los Angeles 90015	748-6511
Paramedical Center	3721 West Washington Boulevard Los Angeles 90016	731-6371
DORSEY COMMUNITY ADULT SCHOOL	3537 Farmdale Avenue Los Angeles 90016	292-0455
EAST LOS ANGELES OCCUPATIONAL CENTER	1084 North Chicago Street Los Angeles 90033	223-1283
FAIRFAX COMMUNITY ADULT SCHOOL	7850 Melrose Avenue Los Angeles 90046	653-4085
FRANKLIN COMMUNITY ADULT SCHOOL	820 North Avenue 54 Los Angeles 90042	256-2144
FREMONT COMMUNITY ADULT SCHOOL	7676 South San Pedro Street Los Angeles 90003	778-1651
GARDENA COMMUNITY ADULT SCHOOL	1301 West 182nd Street Gardena 90247	323-2686
GARFIELD COMMUNITY ADULT SCHOOL	5101 East 6th Street Los Angeles 90022	262-5163
HARBOR OCCUPATIONAL CENTER	239 North Avalon Boulevard Wilmington 90744	549-0161
HOLLYWOOD COMMUNITY ADULT SCHOOL	1521 North Highland Avenue Los Angeles 90028	467-6191
HUNTINGTON PARK COMMUNITY ADULT SCHOOL	6020 Miles Avenue Huntington Park 90255	581-7720

JEFFERSON COMMUNITY ADULT SCHOOL	1319 East 41st Street Los Angeles 90011	231-1166
JORDAN COMMUNITY ADULT SCHOOL	2265 East 103rd Street Los Angeles 90002	564-2595
LINCOLN COMMUNITY ADULT SCHOOL	3501 North Broadway Los Angeles 90031	222-5204
LOS ANGELES COMMUNITY ADULT SCHOOL	4600 West Olympic Boulevard Los Angeles 90019	933-8437
MANUAL ARTS COMMUNITY ADULT SCHOOL	4131 South Vermont Avenue Los Angeles 90037	234-9177
NORTH HOLLYWOOD COMMUNITY ADULT SCHOOL	5231 Colfax Avenue North Hollywood 91601	766-8186
NORTH VALLEY OCCUPATIONAL CENTER	1309 Mott Street San Fernando 91340	365-9684
RESEDA COMMUNITY ADULT SCHOOL	18230 Kittridge Street Reseda 91335	343-1977
ROOSEVELT COMMUNITY ADULT SCHOOL	2611 East Lanfranco Street Los Angeles 90033	263-9388
SAN FERNANDO COMMUNITY ADULT SCHOOL	11133 O'Melveny Avenue San Fernando 91340	365-2558
SAN PEDRO COMMUNITY ADULT SCHOOL	1001 West 15th Street San Pedro 90731	833-3361
SOUTH GATE COMMUNITY ADULT SCHOOL	3351 Firestone Boulevard South Gate 90280	569-4187
UNIVERSITY COMMUNITY ADULT SCHOOL	11800 Texas Avenue Los Angeles 90025	477-2084
VAN NUYS COMMUNITY ADULT SCHOOL	6535 Cedros Avenue Van Nuys 91409	785-5427
VENICE COMMUNITY ADULT SCHOOL	13000 Venice Boulevard Los Angeles 90066	391-0411
WASHINGTON COMMUNITY ADULT SCHOOL	10860 South Denker Avenue Los Angeles 90047	757-4108
WESTCHESTER COMMUNITY ADULT SCHOOL	7400 West Manchester Avenue Los Angeles 90045	670-0443
WEST VALLEY OCCUPATIONAL CENTER	6200 Winnetka Avenue Woodland Hills 91364	346-3540

RESIDENTIAL AND EDUCATIONAL CENTER

SAUGUS URBAN RESIDENTIAL AND EDUCATIONAL CENTER	27234 Bouquet Canyon Road Saugus 91350	680-1577

SKILL CENTERS

EAST LOS ANGELES SKILL CENTER	1230 South Monterey Pass Road Monterey Park 91754	263-6903
PACOIMA SKILL CENTER	13299-13301 Louvre Street Pacoima 91331	896-9558
VENICE SKILL CENTER	324 Lincoln Boulevard Venice 90291	392-4153
WATTS SKILL CENTER	840 East 111th Place Los Angeles 90059	564-4451

AUTHORIZED SUBJECTS

1-299 ACADEMIC EDUCATION

SUBJECT NO.

1-44 ENGLISH

1.1 [PI,UC] **English 1**

Grammar and usage; reading for information and appreciation; development of effective sentences; spelling; punctuation; practical written English for daily use, including better writing, making job applications, preparing accident reports; vocabulary; diagnostic and remedial instruction as needed.
Equivalent to B9 English.

(5 semester periods)

1.2 [PI,UC] **English 2**

Continuation of English 1; punctuation, capitalization, spelling, and vocabulary building; elements of good sentence structure; expression in letters and other written work; reading for information and appreciation; diagnostic and remedial instruction as needed.
Equivalent to A9 English.
Prerequisite: English 1, or equivalent.

(5 semester periods)

1.3 [PI,UC] **English 3**

Application and review of grammar and sentence structure learned in English 1 and 2; advanced study of oral and written expression; concise use of words and expressions; elimination of common errors in speech and writing; vocabulary building; punctuation and capitalization; reading for information and appreciation; diagnostic and remedial instruction as needed.
Equivalent to B10 English.
Prerequisite: English 2, or equivalent.

(5 semester periods)

1.4 [PI,UC] **English 4**

Refinement of skills in composition and letter writing; effective speech and pronunciation; conciseness and clarity in choice of words and expressions; review of grammar, punctuation, capitalization, and spelling; reading for information and appreciation; diagnostic and remedial instruction as needed.
Equivalent to A10 English.
Prerequisite: English 3, or equivalent.

(5 semester periods)

5.1 [PI,UC] **Grammar and Composition – (Intermediate)**

Composition skills with emphasis on grammar, sentence structure, vocabulary building, punctuation, spelling; improving reading skills through comprehension.

(5 semester periods)

5.2 [PI,UC] **Grammar and Composition – (Advanced)**

Review of fundamentals of grammar; sentence structure; good usage; vocabulary building; punctuation; spelling; pronunciation; emphasis on composition.
Prerequisite: English 4, or equivalent.

(5 semester periods)

PI This course is offered either as a regularly scheduled class or part of the PI program. See page xxvi.
UC Course meets one of the subject requirements for the University of California.

SUBJECT NO.

6 **Composition – College Prep**

Fundamentals of written composition; development of applicable skills; sensory impressions, word choice, and control of ideas within the sentence.

(10 semester periods)

7[PI] **English Review and Reading Improvement**

Developing and improving the techniques of speaking, reading, and writing the English language; emphasizing of practical usage; diagnostic and remedial instruction as needed.

(10 semester periods)

10[UC] **American Literature**

Extensive reading in American literature, past and present; critical evaluation and discussion of material read; improvement of reading speed and comprehension; history of American literature; types of literature; development of appreciation for our American literary heritage.

(5 semester periods)

13[UC] **English Literature**

Selected reading in English literature, past and present; analysis and discussion of outstanding works; contributions of literature to the thinking, ideals, and arts of today; study of various types of prose and poetry, and their contributions to our literary heritage.

(5 semester periods)

16[PI] **Modern Literature**

Selected reading in various types of modern literature; study and development of appreciation for the novel, the short story, poetry, and the essay; modern trends in literature; influence of literary works on contemporary life; literature of motion pictures, television, and radio.

(5 semester periods)

19 **World Literature**

Selected reading in literature of other countries; contributions of other lands to our intellectual and artistic heritage; reading, oral and written analysis, and discussion of outstanding works.

(5 semester periods)

21.1 **Journalism 1**

Newswriting; interviewing; privileges and responsibilities of the press; the place of the newspaper in the world of today.

(5 semester periods)

21.2 **Journalism 2**

Continuation of Journalism 1; newswriting; journalistic practices; editorial and feature writing; proofreading; makeup; headline writing; privileges and responsibilities of the press.
Prerequisite: Journalism 1, or equivalent.

(5 semester periods)

22 **Library Fundamentals**

Introduces library organization, services, procedures, practices; offers specific instruction in the work of sub-professional library personnel; emphasizes the values of a career in librarianship.

(2½ semester periods)

[PI] This course is offered either as a regularly scheduled class or part of the PI program. See page xxvi.

[UC] Course meets one of the subject requirements for the University of California.

SUBJECT NO.

27 **Lip Reading**

Demonstration of vibration; exercises in formation of speech sounds; practice in lip reading; voice placement and tone improvement.

(5 semester periods)

28 **Finger Spelling and Sign Language**

Manual alphabet and manual signs for use in communication among deaf and hard of hearing persons.

(5 semester periods)

30[PI] **Power Reading**

Rapid-reading techniques; development of reading skills and higher power of comprehension, recall, interpretation, perception, and appreciation. Emphasis on use of improved study skills and depth, efficiency, and discrimination in reading. Development of flexibility and speed adjusted to the material and purpose of reading and to interest and ability in planning a self-improvement program for continued growth in reading at mature levels; diagnostic and remedial instruction as needed.

(5 semester periods)

32 **Vocabulary Building**

Study of words, definitions, pronunciation, and spelling; development of appreciation for words to be used in building an effective vocabulary.

(5 semester periods)

33[PI] **Semantics**

Intensive study and clarification of changes in the significance attached to words and forms, viewed as a factor in linguistic development; formation of more accurate expression and greater understanding of the naming of the elements of human communication.

(5 semester periods)

35 **Creative Writing**

Development of skills, motivation, and literary maturity necessary for creative writing; exploration of writing, poetry, short stories, and dialogue.
Prerequisite: 10th-Grade English.

(5 semester periods)

36 **Writing for Publication**

Special techniques of the short story; form and style used in writing articles; study of markets; writing for special journals and magazines; advice and constructive criticism of student writings.

(5 semester periods)

38 **Playwriting Workshop**

Special techniques of playwriting; criticism and evaluation of students' work, professional guest speakers; presentation of student-written plays.

(5 semester periods)

39 **Writing for Radio, Television, and Motion Pictures**

Special techniques of writing for radio, television, and motion pictures; types of material most in demand; methods of marketing material; constructive criticism of students' efforts.

(5 semester periods)

[PI] This course is offered either as a regularly scheduled class or part of the PI program. See page xxvi.

SUBJECT NO.

40 **Theater Arts Appreciation**

Comprehensive survey of modern theater; use of aural, visual, and other stimuli to communicate great ideas and ideals; emphasizes four theater disciplines: epic, absurd, fact, cruelty.

(5 semester periods)

45-49 GUIDANCE

46 **Guidance**

Group diagnostic testing of students; aptitudes; mental ability; interest inventories; occupational opportunities; self-evaluation.

(5 semester periods)

48 **Vocational Guidance**

Group guidance toward successful employment; personal preferences, special abilities, academic achievement; testing and its relationship to credit; employment and job selection; occupational orientation covering job and physical requirements, working conditions, and sources of training.

(5 semester periods)

50-89 LANGUAGES

52 **Cantonese**

Basic Cantonese sounds with correct pronunciation and pitch; sentence structure; reading and writing Chinese characters; simple conversation; syntax necessary for correct usage.

(5 semester periods)

54.1 [PI,UC] **French 1**

Introduction to French as currently spoken; correct pronunciation and enunciation; basic speech patterns; practical vocabulary; syntax necessary for simple oral and written French.

(5 semester periods)

54.2 [PI,UC] **French 2**

Continuation of French 1; practical vocabulary of daily and travel expressions; continued study of syntax necessary for accurate spoken and written French.
Prerequisite: French 1, or equivalent.

(5 semester periods)

54.3 [UC] **French 3**

Increased proficiency in oral and written use of French; review of syntax; practice in reading and discussion of simple stories; French customs and manners.
Prerequisite: French 2, or equivalent.

(5 semester periods)

54.4 [UC] **French 4**

Intensive drill on French idioms and syntax; oral and written compositions; continued study of cultural background; introduction to literature.
Prerequisite: French 3, or equivalent.

(5 semester periods)

PI This course is offered either as a regularly scheduled class or part of the PI program. See page xxvi.
UC Course meets one of the subject requirements for the University of California.

SUBJECT NO.

55[PI] **French Reading and Writing**

A review of French syntax and vocabulary as related to reading and writing; recommended for students desiring to improve French reading and writing skills and for persons preparing for university-level language reading examinations.

(10 semester periods)

57 **French Conversation**

Intensive practice in speaking French to develop oral facility and aural comprehension; special attention to articulation, enunciation, and rhythm; vocabulary building of practical and idiomatic expressions; spontaneous expression of ideas in group discussions.
Prerequisite: French 2, or equivalent.

(10 semester periods)

60.1[PI,UC] **German 1**

Introduction to German; correct pronunciation and enunciation; basic speech patterns; practical vocabulary of daily expressions and idioms; syntax necessary for simple oral and written German.

(5 semester periods)

60.2[PI,UC] **German 2**

Continuation of German 1; practical vocabulary of daily and travel expressions; continued study of syntax necessary for accurate spoken and written German.
Prerequisite: German 1, or equivalent.

(5 semester periods)

60.3[PI,UC] **German 3**

Increased proficiency in oral and written use of German; review of syntax; reading and discussion of simple stories; customs and manners of German-speaking people.
Prerequisite: German 2, or equivalent.

(5 semester periods)

60.4[PI,UC] **German 4**

Intensive drill on German idioms and syntax; expansion of vocabulary related to travel and science; oral and written composition; continued study of cultural background; introduction to literature.
Prerequisite: German 3, or equivalent.

(5 semester periods)

61 **Basic Scientific German**

Specific German writing style utilized in technical and scientific literature, with emphasis on the most frequently used words, grammatical forms, and common word roots; practical applications to scientific fields of interest.

(5 semester periods)

63 **German Conversation**

Intensive practice in speaking German to develop oral fluency and aural comprehension; special attention to articulation, enunciation, and rhythm; vocabulary building of practical and idiomatic expressions; spontaneous expression of ideas in group discussions.
Prerequisite: German 2, or equivalent.

(10 semester periods)

[PI] This course is offered either as a regularly scheduled class or part of the PI program. See page xxvi.
[UC] Course meets one of the subject requirements for the University of California.

SUBJECT NO.

66.1 **Hebrew 1**

Introduction to Hebrew; alphabet and vowels; correct pronunciation and enunciation; vocabulary development for practical use; practice in elementary reading; syntax necessary for simple oral and written expression.

(5 semester periods)

66.2 **Hebrew 2**

Continuation of Hebrew 1; expansion of vocabulary; additional practice in speaking, reading, and writing; continued study of syntax necessary for accurate oral and written expression; introduction to classical Hebrew literature and contemporary publications; information on the history and culture of present-day Israel.
Prerequisite: Hebrew 1, or equivalent.

(5 semester periods)

69 **Italian**

Introduction to current Italian; correct pronunciation; practical vocabulary; conversation, reading, and writing; fundamentals of grammar for simple oral and written expression. Information on customs, manners, and literature.

(10 semester periods)

72 **Japanese**

Introduction to Japanese; basic Japanese sounds with correct pronunciation and pitch; sentence structure; reading and writing of "Hiragana" and "Katakana"; simple conversation; syntax necessary for correct usage.

(10 semester periods)

75 **Norwegian**

Introduction to Norwegian; basic Norwegian sounds with correct pronunciation and pitch; sentence structure; fundamentals of grammar for simple oral and written expression; information on customs, manners, and literature.

(10 semester periods)

78.1 **Russian**

Introduction to Russian; pronunciation of Russian sounds; Russian script; simple sentence structure; syntax necessary for correct oral and written expression; practice in speaking, reading, and writing; information on customs, manners, and literature.

(10 semester periods)

78.2 **Russian – Scientific**

Development of knowledge necessary for understanding of scientific and technical Russian; deciphering titles; reading graphs and Russian periodicals; reading and translating Russian scientific papers and other publications.

(5 semester periods)

79 **Serbo-Croatian**

Introduction to Serbo-Croatian (Yugoslav); correct pronunciation, practical vocabulary; simple idioms; syntax necessary for correct oral and written expression; practice in speaking, reading, and writing; information on customs, manners, and literature; study of both Roman and Cyrillic alphabets.

(10 semester periods)

SUBJECT NO.

80 [PI] **Introduction to Spanish**

Introduction to Spanish pronunciation, structure, and basic vocabulary; overview of Spanish grammar, including all major tenses and correct conversational usage; recommended for native speakers to improve reading ability in the language, and for persons preparing for university language reading examinations; or as a review course for persons who have previously studied Spanish.
Credit equivalent to Spanish 1.

(5 semester periods)

81.1 [UC] **Spanish 1**

Introduction to current Spanish; correct pronunciation; basic speech patterns; practical vocabulary of daily expressions and idioms; grammar necessary for simple oral and written Spanish.

(5 semester periods)

81.2 [UC] **Spanish 2**

Continuation of Spanish 1; practical vocabulary of useful daily and travel expressions; syntax necessary for accurate written and spoken Spanish.
Prerequisite: Spanish 1, or equivalent.

(5 semester periods)

81.3 [UC] **Spanish 3**

Increased proficiency in oral and written use of Spanish; reading and discussion of simple stories; review of syntax; customs and manners of Spanish-speaking people.
Prerequisite: Spanish 2, or equivalent.

(5 semester periods)

81.4 [UC] **Spanish 4**

Reading and discussion of current topics from Spanish language newspapers, magazines, and short stories; intensive drill on Spanish idioms and syntax; oral and written compositions; continued study of cultural backgrounds; introduction to literature.
Prerequisite: Spanish 3, or equivalent.

(5 semester periods)

83 **Conversational Spanish for School District Personnel**

Practice in speaking Spanish to develop oral facility and aural comprehension; articulation, enunciation, and rhythm; vocabulary building of practical and idiomatic expressions related to school or going to school; emphasis on providing adequate communication between school personnel and Spanish-speaking persons.

(10 semester periods)

84 **Spanish Conversation**

Intensive practice in speaking Spanish to develop oral facility and aural comprehension; special attention to articulation, enunciation, and rhythm; vocabulary building of practical and idiomatic expressions; spontaneous expression of ideas in group discussions.
Prerequisite: Spanish 2, or equivalent.

(10 semester periods)

[PI] This course is offered either as a regularly scheduled class or part of the PI program. See page xxvi.

[UC] Course meets one of the subject requirements for the University of California.

SUBJECT NO.

85 **Sociological Aspects of Interviewing in Spanish**

Techniques needed by social welfare personnel to converse with the non-English speaking client. Special emphasis is given to the recognition of cultural differences as they affect the interview.

(5 semester periods)

86 **Swahili**

Introduction to Swahili; correct pronunciation; practical vocabulary; simple idioms; syntax necessary for correct oral and written expression; practice in speaking, reading, and writing; customs, manners, and literature.

(5 semester periods)

87 **Swedish**

Introduction to Swedish; pronunciation and rhythm; practical vocabulary; simple idioms; syntax necessary for correct oral and written expression; practice in speaking, reading, and writing; information on customs, manners, and literature.

(10 semester periods)

90-129 MATHEMATICS

91.1 [PI,UC] **Algebra 1**

Positive and negative numbers; simple equations; formulas; polynomials.
Prerequisite: Basic Mathematics, or equivalent.

(5 semester periods)

91.2 [PI,UC] **Algebra 2**

Continuation of Algebra 1; review of fundamentals; equations; factoring; radicals; simple quadratics.
Prerequisite: Algebra 1, or equivalent.

(5 semester periods)

91.3 [PI,UC] **Algebra 3**

Review of Algebra 2; products and factors; fractions; simultaneous equations; powers and roots; quadratic equations.
Prerequisite: Algebra 2, or equivalent.

(5 semester periods)

91.4 [PI,UC] **Algebra 4**

Systems of equations; graphs; ratios; proportions and variations; numerical trigonometry.
Prerequisite: Algebra 3, or equivalent.

(5 semester periods)

92 [PI] **Arithmetic Review**

Review of number combinations in addition, subtraction, multiplication, and division; diagnostic and remedial instruction as needed.

(5 semester periods)

[PI] This course is offered either as a regularly scheduled class or part of the PI program. See page xxvi.
[UC] Course meets one of the subject requirements for the University of California.

SUBJECT NO.

94.1[PI] **Basic Mathematics 1**

Addition, subtraction, multiplication, division of whole numbers, fractions, and decimals; per cent; square root; diagnostic and remedial instruction as needed.

(5 semester periods)

94.2[PI] **Basic Mathematics 2**

Continuation of Basic Mathematics 1; review of fundamentals; area and volume of geometric figures; measurements; metric system; algebra of simple formulas; diagnostic and remedial instruction as needed.
Prerequisite: Basic Mathematics 1, or equivalent.

(5 semester periods)

95 **Practical Mathematics**

Review of arithmetic fundamentals; development of understanding and use of computational skills involving money and banking, insurance, home rentals, leasing, sales and purchases, contract buying, interest, budgeting, taxation, and graphs; diagnostic and remedial instruction as needed.

(5 semester periods)

96[PI] **Introduction to Modern Mathematics**

New concepts of modern mathematics, including structure and application through discovery methods; mathematical patterns. Less emphasis on computation and more on the "why" of problem-solving.

(5 semester periods)

97.1[PI] **High School Mathematics 1**

Functional uses of arithmetic, percentage, measurement, and consumer mathematics; understanding number concepts, use of formulas, estimation, and simple statistical graphs; space perception; intuitive geometry, informal trigonometry, the metric system, application of mathematical principles to the solution of practical problems; diagnostic and remedial instruction as needed.

(5 semester periods)

97.2[PI] **High School Mathematics 2**

Functional uses of arithmetic, percentage, measurement and consumer mathematics; understanding of number concepts; use of formulas, estimation, simple statistical graphs; space perception; intuitive geometry, informal trigonometry, metric system; applications to practical problems; diagnostic and remedial instruction as needed. (May be substituted for Basic Mathematics 2, but credit may not be granted for both.)

(5 semester periods)

100 **Industrial Algebra**

Application of algebra to trade problems; equations and formulas; graphical representation; logarithms.
Prerequisite: Industrial Mathematics, or equivalent.

(5 semester periods)

[PI] This course is offered either as a regularly scheduled class or part of the PI program. See page xxvi.

SUBJECT NO.

103 **Industrial Descriptive Geometry**

Application of descriptive geometry to trade problems; fundamentals; orthographic projection; plotting of points and lines; line directions; true length of lines and planes; trade problems relating to points; planes and solids; intersection and development of surfaces; revolutions and counter revolutions.
Prerequisite: Industrial Trigonometry, or equivalent.

(5 semester periods)

106.1 **Industrial Mathematics 1**

Application of mathematics to trade problems; review of arithmetic and fundamental operations in algebra and geometry.

(5 semester periods)

106.2 **Industrial Mathematics 2**

Application of mathematics to trade problems; principles of geometry, shop trigonometry, logarithms; use of slide rule.
Prerequisite: Industrial Mathematics 1, or equivalent.

(5 semester periods)

109 **Industrial Trigonometry**

Applications of trigonometry to trade problems; angles and functions of angles; the right triangle; functions of angles of any magnitude; functions of two angles; sine and cosine laws.

(5 semester periods)

112.1[PI,UC] **Plane Geometry 1**

Basic concepts; postulates, axioms.
Prerequisite: Algebra 1, 2, or equivalent.

(5 semester periods)

112.2[PI,UC] **Plane Geometry 2**

Continuation of Plane Geometry 1; review of basic concepts; problem solving; circles; measurements; logic; proportions.
Prerequisite: Plane Geometry 1, or equivalent.

(5 semester periods)

115 **Slide Rule**

The theory of the slide rule; problems involving multiplication, division, squares, cubes, square root and cube root; application to trigonometric and logarithmic problems.

(2½ semester periods)

115.1[PI] **Slide Rule, Mathematical Notation and Measurement**

Theory of the slide rule and reading of scales; problems involving multiplication, division, squares and cubes, square root, and cube root; mathematics of large and small numbers by use of powers, combined factors, commutative and distributive principles; metric system.

(5 semester periods)

PI This course is offered either as a regularly scheduled class or part of the PI program. See page xxvi.

UC Course meets one of the subject requirements for the University of California.

SUBJECT NO.

118 [UC] **Solid Geometry**

Three-dimensional geometry; polyhedrons; prisms; cylinders; pyramids; cones, spheres.
Prerequisite: Plane Geometry 2, or equivalent.

(5 semester periods)

121 [PI,UC] **Trigonometry**

Functions of acute angles; logarithms; solution of right and oblique triangles; trigonometric and logarithmic tables.
Prerequisites: Algebra 3 and Plane Geometry 1, 2, or equivalent.

(5 semester periods)

124 [UC] **Mathematical Analysis**

Introduction of analytical methods by means of a study of fundamental definitions and theorems; the line; equation and locus; conic sections; algebraic curves of higher degree; basic concepts of space geometry.
Prerequisites: Algebra 4, Trigonometry, or equivalent.

(5 semester periods)

*130-184 SCIENCES**

131 **Applied Chemistry**

Foods and nutrition; vitamins; preservation of food; textiles; removal of stains; drugs and medicines; cosmetics; paints; water purification; photography; laboratory experiments.
Prerequisites: Chemistry 1, General Science 1, 2, or equivalent.

(5 semester periods)

134.1 [PI,UC] **Chemistry 1**

Structure and classification of matter; oxygen; hydrogen; solutions; acids, bases, and salts; ionization; valences; formulas; balancing equations; periodic table; problems involving laws of chemistry; laboratory experiments.

(5 semester periods)

134.2 [PI,UC] **Chemistry 2**

Continuation of Chemistry 1; important elements; non-metals; light and heavy metals; atomic reactions; food; clothing; effects of narcotics, dangerous drugs, tobacco, and alcohol; cosmetics; latest chemical developments; laboratory experiments.
Prerequisite: Chemistry 1, or equivalent.

(5 semester periods)

137 [PI] **General Science**

Introduction to science; living things; structures, habits, and use of plants; animals; the human body; effects of narcotics, dangerous drugs, tobacco, and alcohol; diseases; diet; nature of matter; air; water; weather; the sun and its planets; the earth; magnetism and electricity; conservation of natural resources.

(5 semester periods)

140.1 [UC] **Biology 1**

Health, hygiene; effects of narcotics, dangerous drugs, tobacco, and alcohol; parts and functions of the body; reproduction; first aid; alcohol; genetics; problems and laboratory activities.

(5 semester periods)

[PI] This course is offered either as a regularly scheduled class or part of the PI program. See page xxvi.

[UC] Course meets one of the subject requirements for the University of California.

*Science courses currently offered through Programmed Instruction do not meet the high school laboratory requirements.

140.2 [UC] **Biology 2**

Continuation of Biology 1; structure, production, conservation, and use of plants; evolution; genetics; behavior; use and conservation of animals; problems and laboratory activities.
Prerequisite: Biology 1, or equivalent.

(5 semester periods)

141 **Marine Biology**

A general survey course of the many marine environments, of the varied animal species that live in the sea, and of the plants of the coastal waters.

(5 semester periods)

143.1 **Modern Science 1**

Application of science to the modern world; social implications; effects of narcotics, dangerous drugs, tobacco, and alcohol; transportation facilities; machines in our homes; instruments of communication; understanding our universe; science in everyday life; problems and laboratory activities.

(5 semester periods)

143.2 **Modern Science 2**

Continuation of Modern Science 1 in its relationship to the modern world; contribution of photography, electricity, communications, machines, and air and space travel in everyday life; problems and laboratory activities.

(5 semester periods)

146.1 [UC] **Physical Science 1**

Measurements; matter and motion; forces; work and power; the automobile; the airplane; problems and laboratory experiments.

(5 semester periods)

146.2 [UC] **Physical Science 2**

Continuation of Physical Science 1; nature of sound, light, and electricity; telephone; radio; television; heating and refrigeration; air conditioning; chemistry in industry; problems and laboratory experiments.
Prerequisite: Physical Science 1, or equivalent.

(5 semester periods)

149.1 [UC] **Physics 1**

Physical laws and principles; measurements; mechanics of gases; force; motion; machines; heat; problems and laboratory experiments.

(5 semester periods)

149.2 [UC] **Physics 2**

Continuation of Physics 1; electricity, sound; light; radio; electronics; atomic energy; cosmic rays; problems and laboratory experiments.
Prerequisite: Physics 1, or equivalent.

(5 semester periods)

[UC] Course meets one of the subject requirements for the University of California.

SUBJECT NO.

152.1 [PI,UC] **Physiology 1**

Organs of the human body; bones, tissues, and muscles; dissection of living and non-living materials.

(5 semester periods)

152.2 [UC] **Physiology 2**

Continuation of Physiology 1; systems of the body; effects of narcotics, dangerous drugs, tobacco, and alcohol; laboratory demonstrations; laboratory experiments.
Prerequisite: Physiology 1, or equivalent.

(5 semester periods)

160.1 [PI] **Astronomy**

The sun, the planets, the constellations, and the night sky.

(5 semester periods)

161 **Fundamentals of Geology**

History of the earth; oceanic movements and temperature; atmospheric movements and temperature; constitution of rocks; condition, structure, and arrangement of rock masses; movements of the earth's crust.

(5 semester periods)

164.1 **Mineral Identification 1**

Physical, chemical, optical, and crystal properties of minerals; description, nonemclature, structure, and composition; methods of identification.

(5 semester periods)

164.2 **Mineral Identification 2**

Continuation of Mineral Identification 1; identification of minerals through their properties; physical, chemical, and optical laboratory techniques; valuation.

(5 semester periods)

166 **Mineralogy**

Identification of rocks; properties of composition, texture, and structure; examination of hand specimens; instruments.

(5 semester periods)

168 **Commercialization of Mineral Resources**

General extraction and commercial uses of mineral materials of the earth; distribution, character, occurrence, and formation.

(5 semester periods)

185-236 SOCIAL SCIENCES

186.1 [UC] **United States History 1**

Political, social, and economic development of the United States; discovery; colonial period; struggle for independence; establishment of constitutional government; the westward movement; sectionalism and the Civil War; personalities, ideas, and events in American history; roles and contributions of various ethnic groups to early economic, political, and social development of California and the nation.

(5 semester periods)

[PI] This course is offered either as a regularly scheduled class or part of the PI program. See page xxvi.

[UC] Course meets one of the subject requirements for the University of California.

SUBJECT NO.

186.2[UC] **United States History 2**

Continuation of United States History 1; development of the United States from 1895 to the present; industrial expansion; foreign relations; the two world wars; the emergence of the United States as a world power; California history; study of the roles and contributions of various ethnic groups to modern economic, political, and social development of California and the nation.
Prerequisite: U.S. History 1, or equivalent.

(5 semester periods)

188.1[PI,UC] **United States Government 1**

Legislative, executive, and judicial framework and functions of national, state, and local governments; traditions, practices, and personalities; privileges and responsibilities of individuals under a democratic form of government; problems in California government.

(5 semester periods)

188.2[PI] **United States Government 2**

A problem-solving approach to the study of the United States government, including contemporary American problems, economics, international relations, or current history; operation of state and local governments.

(5 semester periods)

191 **Political Problems**

Historical and current political problems, both domestic and foreign; group discussions based upon films, recordings, and reading assignments.

(5 semester periods)

194 **Contemporary American Problems and Government**

Psychological, sociological, and economic aspects of life as related to contemporary American problems in government; effects of narcotics, dangerous drugs, tobacco, and alcohol.

(5 semester periods)

197 **United States Government and World Affairs**

International, national, and local events; interpretations from backgrounds of geography, history, and social sciences as they affect our government.

(5 semester periods)

199[PI] **United States Geography**

Physical, economic, and political aspects of important areas of the United States; influences of geography on political, economic and social problems.

(5 semester periods)

200 **World Geography**

Physical, economic, and political aspects of important world areas; influences of geography on world problems and conditions.

(5 semester periods)

204.1 **World History 1**

Social, economic, and political history of mankind from the earliest civilization to 1800; contributions of past civilizations to modern life; persons and ideas that have influenced human progress.

(5 semester periods)

[PI] This course is offered either as a regularly scheduled class or part of the PI program. See page xxvi.

[UC] Course meets one of the subject requirements for the University of California.

SUBJECT NO.

204.2 **World History 2**

Continuation of World History 1 from 1800 to the present; contributions of past civilizations to modern life; persons and ideas that have influenced human progress.
Prerequisite: World History 1, or equivalent.

(5 semester periods)

208 **California History and Government**

Survey of four centuries of California history, from early Indian period to present; reviews the wide variety of California geography, including topography, climate; involves study of political heritage and formation, changes, and present structures of California government.

(5 semester periods)

212 **Philosophy and Society**

Philosophies of various societies, their effect upon basic ideas, beliefs; man's philosophic viewpoints as active in nature and profoundly affect political, social, and family structures; the relationship between philosophy and democracy.

(5 semester periods)

213[PI] **Applied Psychology**

Investigation of human behavior as an aid to solving practical human problems; understanding of interests, aptitudes, desires, and "drives" in personal adjustment; psychology of human relations.

(5 semester periods)

214[PI] **Physiological Psychology**

Reasons for psychological reactions through the physical, rather than the reasoning, system; includes functions of touch, sight, and similar receptors in response to stimuli.

(2½ semester periods)

215 **Psychology of Personal Development**

Skills and exercises in personal growth and self-fulfillment; provision of a positive and supportive setting, enabling each student to develop individual abilities and resources for greater self-actualization; exploration of personal leadership; methods of working effectively as a community-oriented citizen.

(5 semester periods)

216 **Social Psychology**

Application of principles of psychology to individual and social relationships; the family and its place in society; background and development of our society; psychology in human relations; problems of a changing social and cultural environment.

(5 semester periods)

217 **Understanding Alcoholism**

Disease of alcoholism, its effects upon the human body, and its medical aspects; how alcoholism affects the individual, family members, industry, community, and nation; organizations available to help the alcoholic and his family.

(2½ semester periods)

218 **Economics and the Consumer Law**

Introductory, basic concepts of economics; principles of money management, budgeting, wise "buymanship," fraud protection; legal rights of and recourses open to consumers.

(10 semester periods)

[PI] This course is offered either as a regularly scheduled class or part of the PI program. See page xxvi.

SUBJECT NO.

219[PI] **Economics**

Characteristics and functions of the economic system; production and distribution of wealth; laws of supply and demand; business organization; government regulations; labor problems; money and banking; business fluctuations.

(5 semester periods)

220 **Comparative Religions**

Introduction to the major religious movements which have existed for more than a century; a concise survey of the origin, the sacred scriptures, the historical development, and the contributions of the eleven major religions.

(5 semester periods)

221 **Contemporary Moral Issues**

Course content is divided into discussion topics, based upon assigned readings from the textbook and other collateral readings; expert knowledge and opinion will be introduced whenever possible, principally by inviting specialists in various fields to take part in the discussions.

(5 semester periods)

222 **Introduction to the Humanities**

Materials and forms out of which any single work of art is created; encouragement of the individual to enlarge his perceptions and appreciation of all art forms including literature, music, and the visual arts through a study of outstanding works from the entire broad field of the humanities.

(5 semester periods)

223 **Ways of Mankind**

Exploration and study of the ways of mankind in relation to his culture, language technology, education, family, status, authority, values, religion, ethics, and society in general.

(2½ semester periods)

225 **Afro-American Culture**

A survey class covering the historical and cultural background of the Afro-American, including the folklore, dance, music, art, literature, and science.

(5 semester periods)

227 **Negro History**

Political, social, and economic development of the Negro in the United States.

(5 semester periods)

230 **Mexican American History and Culture**

A sketch of the culture of Mexico, including political and economic history, to develop a better understanding of the people, their problems, and the solutions to the problems; takes into consideration the Mexican and Spanish migration to the United States and the problems that have resulted.

(5 semester periods)

232 **Archeology of Mexico**

Review of archeological discoveries, ranging from sites of early man, or European contact locations, to areas influenced by Mexican aboriginal cultures. Regions adjacent to present-day Mexico, both to the north and south, will be discussed with regard to past interplay of cultures. In addition to archeological data, information from surviving aboriginal cultures will be considered to foster an appreciation of Mexican culture and history and its bearing on present-day social organization.

(5 semester periods)

[PI] This course is offered either as a regularly scheduled class or part of the PI program. See page xxvi.

SUBJECT NO.

237-254 SPEECH

237 **Speech Correction**

Physical and psychological aspects of speech; factors affecting individual speech; correction of individual speech problems by analysis, application, and practice; development of voice and vocabulary.

(5 semester periods)

238.1 **Public Speaking**

Fundamentals of effective public speaking; practice in organization and delivery; development of voice, vocabulary, diction, and poise; public-address system techniques; elements of parliamentary procedure.

(5 semester periods)

238.2 **Advanced Speech**

Continuation of Public Speaking; review of fundamentals; parliamentary procedure; group discussion forums; the panel, forum, symposium, debate; interviews; analysis of the duties and responsibilities for effective speech used by officers of civic, business, and professional organizations.
Prerequisite: Public Speaking, or equivalent.

(5 semester periods)

240 **Principles of Drama**

History of drama; great plays and playwrights; principles of stage movement, voice projection and expression, and pantomime; acting of scenes and one-act plays with emphasis on voice and characterization.

(5 semester periods)

241 **Basic Acting Techniques**

Voice and voice qualities, voice tones, speech, diction; characters, concentration, poise, pantomime, dramatic construction; artistic feeling, inspiration; stage areas, stage direction, analysis of scenes; preparation of actors for participation in little theater groups.

(5 semester periods)

243 **Play Production**

Techniques of acting in modern dramatic media; workshop experimentation in acting, staging, lighting, and costuming plays; study of theatrical make-up; production of a modern three-act play for public performance.
Prerequisite: Principles of Drama, or equivalent.

(5 semester periods)

246 **Radio and Television Acting**

Microphone techniques; emphasis on voice characterization for radio; workshop in announcing, newscasting, interviewing, radio and television drama.

(5 semester periods)

280-299 STUDY LABORATORY INSTRUCTION

280 **High School Subjects Review–GED Preparation**

Comprehensive review of the key concepts in the high school curriculum contained in the five basic subject areas of English Grammar, Social Studies, General Science, English Literature, and Mathematics.

(10 semester periods)

300-699 BUSINESS EDUCATION

SUBJECT NO.

300-319 ACCOUNTING

301.1 Bookkeeping 1

Fundamentals of double-entry record-keeping as applied to proprietorship; systematic recording of business transactions; use of journals and ledgers; sales and purchase transactions; banking; payrolls; introduction to worksheets, statements, and closing entries.
Prerequisite: Business Mathematics, or equivalent.

(5 semester periods)

301.2 Bookkeeping 2

Review of bookkeeping principles: Combination journal, petty cash fund, problems relating to sales and purchases, payroll taxes and reports, depreciation of fixed assets, disposing of fixed assets, bad debts and accounts receivable, use of cash register, sales taxes, other sales and purchases transactions, notes and interest, and accrued expenses.

(5 semester periods)

302 Motor Accounting – Automotive Dealership

Review of principles and practices of accounting; practical applications of accounting procedures in an automotive dealership.
Prerequisite: Bookkeeping 1 or equivalent.

304 Introduction to Accounting

A survey of principles and practices of specialized business operations involving departmental and payroll accounting; worksheet adjustments for valuation accounts; accrued, deferred, and prepaid items; and partnership accounting.
Prerequisites: Bookkeeping 1, 2, or equivalent; Business Machines recommended.

(5 semester periods)

305 Government Budget Preparation

Elementary budget theory; practical applications in the preparation, execution, and control of a governmental budget.

(5 semester periods)

316.1 Income Tax – Personal

State and federal income tax laws; problems associated with tax returns of individuals; practice in the preparation of tax forms.

(5 semester periods)

316.2 Income Tax – Accountants

State and federal tax laws for corporations, partnerships, estates, and trusts; advanced accounting procedures for accountants preparing returns for clients.

(5 semester periods)

318 Tax Planning for Small Business

Introduction to small business organizations; accounting systems used by small businesses; Federal tax laws and tax forms dealing with small businesses; procedures for preparation of income tax returns; methods of computing taxable income and income tax liability; procedures for preparation, filing, and payment of the declaration of estimated income tax.

(5 semester periods)

SUBJECT NO.

320-339 BUSINESS DATA PROCESSING

320 **Key Punch**

Instruction and practice in the use of the alphabetic and numeric key punch machines; applications to business problems.
Prerequisite: Typing speed of at least 40 words per minute.

(5 semester periods)

321 **Fundamentals of Data Processing – orientation**

Survey of data processing; introduction to various branches of field and to types of employment opportunities.

322 **Introduction to Data Processing**

Orientation to data processing; the data processing cycle; development of methods, punched cards, systems, number systems, program control, programming systems.

(5 semester periods)

323 **Basic Principles of Data Processing**

Theory and practice of operation and basic programming of common punch card equipment; purpose of tabulating cards; uses and relationships of machines as follows: interpreter, sorter, reproducer, collator, calculator, tabulator; flow charts; job timing.
Prerequisite: Introduction to Data Processing, or approval of instructor.

(5 semester periods)

326 **Introduction to Computer Programming**

Basic principles of programming; a stored program system, using both tape and card methods; machine components; flow charts; instructional format; operation codes; timing; input-output control systems.

(5 semester periods)

329 **Program Language (PL)**

A high-level computer programming language designed for application to both scientific and business problems.
Prerequisite: Introduction to Computer Programming.

(5 semester periods)

330 **Fortran Programming**

Theory and practice in use of the Fortran IV Computer Language under the IBM 360 Operating System; planning and development of several scientific investigations; job control language necessary to conduct Fortran Programs under the IBM 360 Operating System.
Prerequisite: Ability of student to benefit from course to be determined by instructor.

(5 semester periods)

331 **COBOL Programming**

COBOL is a high-level computer programming language designed primarily for use in resolving business-oriented data processing problems. COBOL is an acronym for *CO*mmon *B*usiness *O*riented *L*anguage.
Prerequisite: Introduction to Computer Programming.

SUBJECT NO.

332 **360 – Assembly Language**

Low-level, machine-oriented programming language (as opposed to high-level, problem-oriented languages, such as COBOL and PL); deals with characteristics of the various 360 computer configurations.
Prerequisite: Ability of student to benefit from course to be determined by instructor.

(5 semester periods)

333 **Computer Operating**

"Hands on" training on computer equipment; field trips to computer installations; and workshops on how to mount tapes, load cards, etc.; types of hardware used in the industry; lectures and workshops utilizing 360-30 Console Mock-up.
Prerequisite: Basic Principles of Data Processing.

335 **PERT and Critical Path Method**

Introduction to the latest techniques in planning, scheduling, and control; practical training in PERT (Program Evaluation and Review Techniques) and CPM (Critical Path Method) as management processes; principles of planning for simple to complex data processing jobs, daily business problems, and construction projects.

(5 semester periods)

340-359 BUSINESS MACHINES

341.1 **Business Machines – Introduction**

Introduction to the use of business machines; adding machines (full and ten-key); bookkeeping machines (accounting, billing, posting); calculators (key-driven, rotary printing); comptometry (key-driven calculator).

(5 semester periods)

341.2 **Business Machines – Advanced**

Increased proficiency in the use of business machines; specialization for competency in selected machines; advanced problems and applications of machine usage.

(5 semester periods)

345 **Key-Driven Calculators**

Introduction to key-driven calculators; fundamental techniques of operation; basic problems involving addition, subtraction, multiplication, and division; drills to increase speed and accuracy; application of fundamentals to various types of business problems.
Prerequisite: Business Mathematics.

(5 semester periods)

346 **Comptometry 1-6 – Key-Driven Calculators**

Introduction to the use of comptometer or Burroughs calculator (key-driven calculator); fundamental techniques of operation; basic problems involving addition, subtraction, multiplication, and division; drills to increase speed and accuracy; application of fundamentals to various types of business problems.

(10 semester periods)

352 **Transcribing Machines**

Instruction and practice in the operation of various types of transcribing machines.
Prerequisite: Typewriting 3, or equivalent.

(2½ semester periods)

360-374 FINANCE

361 **Fundamentals of Credit**

Classification and appropriate uses of credit; forms used to apply for, and establish credit; criteria and sources of information; functions of each section of a typical credit department.

SUBJECT NO.

364 **Credit, Collections, and Practices**

Suitable and effective collection devices; techniques, principles, and general practices; analysis of financial statements; types of collection letters; skiptracing; legal provisions; court actions.

370[PI] **Personal Finance**

Application of principles of finance to problems in everyday living; analysis of the functions of financial institutions; selection of services for borrowing money, buying insurance, buying a home, and making investments; maintenance of financial records; importance of making a will.

(5 semester periods)

373.1 **Investments 1**

Principles of investment; various types of investments; operation of investment markets and sources of information.

(5 semester periods)

373.2 **Investments 2**

Stocks and bonds as investments, using the stock market analysis, industry analysis, and company analysis approach; how to identify market trends and basic indicators, using various sources of information.
Prerequisite: Investments 1.

(5 semester periods)

375-419 GENERAL BUSINESS

375 **Business Organization and Practice**

Business for workers and consumers; business organization, ownership, and management; thrift, budgeting, money and banking, credit, insurance; buying goods and services, business and government; personal financial management.

(5 semester periods)

378[PI] **Business Communication**

Effective use of English in business; general review of composition, grammar, and usage; emphasis on sentence structure, punctuation, word usage, business vocabulary, and spelling.
Prerequisite: English 2, or equivalent.

(5 semester periods)

380 **Business Correspondence**

The use of written communications in business; fundamentals of good letter writing; practical experience in writing business letters, inter-office communications, and reports.
Prerequisite: Business English, or equivalent.

(5 semester periods)

382 **Report Writing**

Purposes of reports and memoranda, principles of clear statement, logical patterns of organization; outlines; section and paragraph headings; diction; punctuation; paragraph and sentence structure; mechanics of style; introductory section, transitional passages, concluding sections; checklists for evaluating reports and memoranda; psychology of communication.

(5 semester periods)

[PI] This course is offered either as a regularly scheduled class or part of the PI program. See page xxvi.

SUBJECT NO.

385 PI **Business Mathematics**

Review of fundamentals; general problems of budgeting; banking; interest and credit; income tax; accounting; installment buying; wages; related business activities.

(5 semester periods)

388 **Civil Service Preparation**

Review of fundamentals of arithmetic, grammar, spelling, punctuation, and capitalization; vocabulary building; occupational information, including requirements for civil service or business positions.

(5 semester periods)

401 **Principles of Storekeeping and Warehousing**

Survey of fundamentals of storekeeping and warehousing; organization and function of store branch; order selection; checking and packing; receiving and shipping; material-handling equipment; basic-business procedures; safety practices; security; inventory procedures and methods.

(2½ semester periods)

420-439 INSURANCE

421 **Fundamentals of Insurance**

Introduction to the history, ethics, economics, and types of insurance; state laws which govern transactions; agency and brokerage contracts; vocational opportunities; insurance coverage planning; preparation for license examination.

(5 semester periods)

424 **Casualty Insurance**

Application of general principles of insurance to all types of casualty, including bodily injury and property damage; workmen's compensation; liability; burglary, robbery, and theft; plate glass suretyship; fidelity and forgery; boiler and machine insurance; accident and health insurance.

(5 semester periods)

427 **Fire and Inland Marine Insurance**

Application of general principles of insurance to policy contracts; underwriting of fire, inland marine, and allied property insurance lines; insurable interest; the policy; extensions; limited coverage; insurance code; basic fire coverage; provisional forms.

(5 semester periods)

430 **Automobile Material Damage Adjustment Insurance**

Nomenclature; Flat Rate Manual; overlap; uniform sequence; analysis of estimates; damage to automatic transmissions, power steering, and power brakes; frame damage; plastic body repairs; making estimates.

(5 semester periods)

433 **Life Insurance Fundamentals**

Introduction to fundamentals of life insurance; types of life insurance carriers; life-policy contracts; policy conditions; selection of risks; policy applications and their processing.

(5 semester periods)

PI This course is offered either as a regularly scheduled class or part of the PI program. See page xxvi.

SUBJECT NO.

435 **Insurance Inspecting**

Fundamentals of investigation; methods of reporting; interview techniques; legal doctrines; injury and illness evaluation; terminology, including insurance, medical, and legal terms.

(5 semester periods)

436 **Insurance Claims Adjustment**

Principle of handling claims; first- and third-party claims; policy coverage; damage appraisals; legal doctrines, including law of torts; injury evaluations; illnesses, injuries, and other medical conditions.

(5 semester periods)

439 **Medical Insurance**

Organization and types of medical insurance for groups; professional liability and malpractice; Blue Shield; Blue Cross; workmen's compensation; accident and health coverage; indemnity and public liability.

(5 semester periods)

440-454 LAW

441 **Business Law**

Court procedure; elements of contracts; bailments; personal property; sales contracts; negotiable instruments.

(5 semester periods)

444 **Law for Laymen**

Various phases of law that affect the layman; contracts, agents, sales, domestic relations, torts, wills, securities, transactions in personal property and real property, including landlord and tenant relationships.

(5 semester periods)

447 **Estate Planning – Laws of Wills, Trusts, and Estates**

Descent and distribution of property in California; administration of estates; gift and estate taxes; trusts; probate; charitable gifts and the proper use of insurance; planning will and estate.

(5 semester periods)

450 **Building Construction Laws**

Lien laws as set forth in the Business and Professional Code; formation of building contracts; relation of the California Contractor License Board to contractors and corporations dealing in building construction.

(5 semester periods)

455-509 MANAGEMENT AND SUPERVISION

456 **Principles of Management**

Survey of various phases of business; organization; operation, finance, personnel, marketing; planning; business and government relations.

(5 semester periods)

SUBJECT NO.

459 **Small Business Management**

Organization and operation of a business; selection of location; establishment of the specialty; long- and short-term budgeting; record keeping; managerial aids; efficient use of personnel and merchandise.

(5 semester periods)

462 **Office Management**

Practical office methods; forms control; equipment and supplies; budgetary control; reports; procedure for simplifying work; personnel supervision.

(5 semester periods)

463 **Hotel-Motel Management**

Organization of hotels and motels; the various departments and their operation; employment markets; evaluation of student potential for success in the field.

(10 semester periods)

465 **Sales Management**

Organization of sales departments, including recruiting, selecting, training, directing, and compensation; determination of territories, sales policies, quotas, budgets, and expenses; liaison with other management divisions, particularly advertising and credit departments.

(5 semester periods)

468 **Principles of Credit Union Management**

History of the credit union; organizational structure; delinquency control and collections; operating procedures; interest theory; duties of credit committee; loan policies; credit union organizations.

(5 semester periods)

469 **Credit Union Management Accounting**

Credit union operations; account principles; opening accounts; accounting for cash; transacting loans; reconciling the bank account; closing routines; delinquency control.

(5 semester periods)

471 **Public Relations Management**

Ways of identifying the various public groups; selecting the most effective techniques and media for reaching the chosen audience; criteria for building a total program and for planning a specific campaign; methods of evaluating success of projects.

(5 semester periods)

475 **Institutional Management**

Duties and responsibilities of the executive housekeeper in hospitals, hotels, motor hotels, department stores, clubs, churches, and other institutional and industrial establishments.

(5 semester periods)

476 **Personnel Management**

Orientation, fundamentals, and organization of the personnel department; selection and development of employees; employee efficiency and morale; employer-employee relations; wage scales and benefits.

(5 semester periods)

SUBJECT NO.

477 **Business Psychology**

Application of principles of psychology to supervision in business and industry; explanations in non technical language; aspects of human behavior, motivation, habits, instincts, interests, learning power, emotions, attitudes, personalities.

(5 semester periods)

480 **Supervision Fundamentals**

Employee instruction; employee relations; supervisory and personnel principles; application of principles to specific working situations; handling grievances; improving job methods; introducing change; motivating greater productivity; effects of management policies on employee relations.

(5 semester periods)

482 **Supervision Practices**

Development of effective supervision techniques; preparation of schedules; management of problems; supervision of employees; assignment of employees; efficient use of manpower.

(5 semester periods)

483 **Employee Relations**

Judgment in understanding of individual and group behavior; personality factors, attitudes; ways of working together for more efficient and effective job performance.

(5 semester periods)

486 **Employee Instructions**

Methods and techniques of instruction to insure better job performance for all levels of supervision; follow-up; retention.

(5 semester periods)

489 **Business Conference Leading**

Finding ways of most effective use of time; building the agenda; choosing and notifying personnel; conducting the meeting; encouraging contribution to discussion; reaching agreement; determining the goals, evaluation, follow-through.

(2½ semester periods)

492 **Work Simplification**

Principles of job-methods improvement; motion economy; layout for efficient operation; improvements of conditions for employees.

495 **Production Planning and Controls**

Purposes and objectives of planning and controls; manufacturing costs; plans for quality, quantity, and production controls; control of personnel, organization, and materials.

(5 semester periods)

498 **Communication for Supervisors**

Employing principles of clear and effective communications; overcoming verbal barriers; speaking and listening effectively; communicating by telephone; interviewing and counseling; preparing business letters, memos, bulletins, and reports.

(5 semester periods)

SUBJECT NO.

510-559 MERCHANDISING

511 **Principles of Marketing**

Distribution of commodities from the producers or manufacturers through the retailer to the ultimate consumer; classification of commodities and services; functions and channels of the various distributors; plans, purchases, and promotions.

(5 semester periods)

514 **Marketing Practices**

Specifications of successful distribution in individual fields; study of functions in the field; departments within the field; management problems; merchandising plan; individual promotions.

(5 semester periods)

517 **Current Merchandising Problems**

Current status of the market; regulations affecting the industry; current promotion campaigns; buyer habits and trends.

(5 semester periods)

520 **Fundamentals of Advertising**

Principles and practices of advertising; purpose of campaigns; copy layout; slogans, trade marks, and media; plans for total and individual campaigns.

(5 semester periods)

525 **Service Station Sales and Management**

Specific problems related to selling at service stations; knowledge of product; customer relations; punp-island procedures; service procedures; record keeping; housekeeping; cost control; and opportunities in service station management.

(5 semester periods)

526 **Selling Home Furnishings**

Specific problems related to furniture and home accessory sales; total room planning and individual pieces; room arrangement; fashion trends.
Prerequisite: Applied Art for Retailing, or permission of instructor.

(5 semester periods)

529 **Textile Analysis and Sale**

Sources and characteristics of man-made and natural fibers; processes of manufacturing and finishing; selection, use, care, and fashion trends; application to clothing and interior decoration field.

(5 semester periods)

532 **Mathematics of Retailing**

Fundamentals of arithmetic for sales personnel, including fractions, percentage, discount, interest; computation of sales tax and luxury tax; mark up and mark down; use of sales checks, cash registers, time clocks.

(5 semester periods)

SUBJECT NO.

535 **Retail Cashiering and Grocery Checking**

Development of skills in using cash register, rapid and accurate scaling, grocery arithmetic, check-stand procedures; customer relations, appearance, and personal grooming; check and money handling; produce identification; security.

(15 semester periods)

538 **Retail Produce Practices**

Buying; receiving and handling produce; building displays; caring for produce to reduce spoilage; pricing; trimming and pre packaging; advertising; managing department.

(5 semester periods)

539 **Commercial Floristry Design**

Basic principles of floral design and care of cut flowers; practical shop work in designing of corsages, commercial floral displays, and funeral tributes; basic principles of shop management.

(10 semester periods)

541 **Fundamentals of Sales**

Selling process in the wholesale and specialty fields; development of sales plans; security prospects; development of sales personality and techniques of successful selling through practice in sales presentations; product analysis; customer relations; closing the sale; follow-up service.

(5 semester periods)

542 **Advanced Sales**

Effective selling techniques; use of motivation; emphasis on responsibilities in human relations; discussion of case problems; perfection of sales talks; analysis of sales plans; introduction to sales management.

(5 semester periods)

544 **Salesmanship Practices**

Development of effective selling techniques; critical analysis of various parts of sales; review of latest methods in selling, including use of visual aids and role playing; securing prospects; development of more and larger sales to present customers; customer service and follow-up.
Prerequisite: Fundamentals of Salesmanship or selling experience.

(5 semester periods)

547 **Sales Speech**

Development of effective sales presentations; improvement in speaking ability, self confidence, appearance; oral sales presentations; evaluation and analysis of organization, logic, voice, emotional effect.

(5 semester periods)

550 **Sales Psychology**

Review of principles of salesmanship; methods of conquering fears of salesmen; study of motivations that make customers buy; techniques for changing customer attitude; creation of desire to buy; post sale procedures.

(5 semester periods)

SUBJECT NO.

553 **Sales Institute**

Brief course, consisting of several meetings; effective selling techniques; emphasis on current market conditions; guest speakers and a panel discussion.

560-589 REAL ESTATE

561 **Real Estate Principles**

Types of property; policies of urban and suburban development; agricultural land usage; subdivision; major influences affecting city growth trends; functions of private and governmental agencies; terminology.

(5 semester periods)

564 **Real Estate Law**

Major aspects of the laws of real property, including the organization and function of the State Division of Real Estate; contracts, deeds, titles, liens and encumbrances. escrows, leases, zoning, financing, land descriptions; brokerage; preparation for California state license to sell real estate.

(5 semester periods)

565 **Real Property Descriptions**

Legal descriptions of property; types of descriptions, terminology, controlling principles, applications; practical exercises used to develop understanding of and ability to write property descriptions.

(5 semester periods)

567.1 **Real Estate Appraisal 1**

Purposes and functions of residential appraisals; the nature of property and value; value and price change; neighborhood analysis; city growth; depreciation; appraisal techniques, appraisal reports.

(5 semester periods)

567.2 **Real Estate Appraisal 2**

Analysis of income properties; profit and loss statements; present worth tables; capitalization rates; methods of capitalization; leasehold interest; subdivisions effect on financing appraisal.
Prerequisite: Real Estate Appraisal 1, or permission of instructor.

(5 semester periods)

570 **Real Estate Sales**

Development of effective selling techniques; review of latest selling methods; securing prospects and listing; customer service and follow-up.

(5 semester periods)

573 **Real Estate Finance**

Capitalization of income, interest, and new yield; types of loans, loaning agencies; insurance coverage; legal provisions of loans; repayment clauses.

(5 semester periods)

SUBJECT NO.

576 **Real Estate Practices**

Establishing the real estate office, securing listings and prospects; showing properties and closing sales; improving property through building, construction, and landscaping.

(5 semester periods)

579 **Property Management**

Management of income property; methods used in renting; maintenance and upkeep, reduction of overhead, purchasing techniques; analysis of investments; leases; liabilities; legal aspects, including building and sanitation, baggage liens, insurance, workmen's compensation.
Prerequisites: Real Estate Law and Real Estate Finance, or permission of instructor.

(5 semester periods)

582 **Apartment House Law and Management**

Laws, rules, and regulations governing multiple family dwellings, apartment houses, hotels, bungalow courts; leases, notices, eviction, maintenance, decoration, baggage liens, liability of landlords, labor laws, and general management of real property.

(5 semester periods)

585 **Escrow Practices**

Classification of property; types of deeds and transfers of titles; title insurance; usual methods used in opening the transaction, developing the file, closing procedures, handling bulk sales, cancelling escrows.

(5 semester periods)

587 **Condominiums**

Comparison with other forms of multi-family residence ownership; deals with state regulatory agencies; the declaration; the owners' association; compliance with the Subdivision Map Act; commercial and leasehold condominiums; the future condominiums.

(5 semester periods)

588 **Real Estate Investments**

Introduction to analysis of various types of income properties for investment purposes; locations, income, operating expenses, depreciation, and the computation of actual net income; includes retail stores, shopping centers, motels, hotels, lofts, apartment houses, other units; mortgage investments; land investments.

(5 semester periods)

589 **Building Residential or Income Property**

Organizing and developing plans for a building project; designing to provide both laymen and those persons engaged in the construction with understanding of site selection; drawing plans and specifications; financing; selecting a contractor; negotiating a contract; supervising construction; landscaping.

(5 semester periods)

590-659 SECRETARIAL SCIENCE

592 **Shorthand Theory**

Basic principles and theory of Gregg Shorthand; development of basic skills and techniques in shorthand reading and writing; dictation of practice material; minimum speed of 60 words per minute.

(10 semester periods)

SUBJECT NO.

594 **Shorthand Theory Review**

Review and mastery of principles and theory of Gregg Shorthand; short cuts; dictation; skills and techniques of speed development.
Prerequisite: Shorthand Theory or equivalent.

(5 semester periods)

596 **Shorthand Dictation**

Speed-building techniques and development of skills: general and business dictation material; office style dictation from 60 words to 140 words per minute; dictation and minimum speed of 60 words per minute on practice material.
Prerequisites: Shorthand Theory and minimum speed of 60 words per minute on practice materials.

(10 semester periods)

598 **Legal Dictation**

Definition, derivation, and explanation of legal terms and phrases; legal vocabulary with shorthand outlines; dictation of legal material; legal forms and documents.
Prerequisites: Typewriting and speed of 100 words per minute in shorthand.

(10 semester periods)

600 **Court Reporting**

Court-reporting principles and techniques; development of skill in taking rapid and sustained dictation; practice in taking two-voiced, four-voiced, and other specialized dictation; preparation for Official Court and Certified Shorthand Reporter Examinations.
Prerequisites: Typewriting and speed of 120 words per minute in shorthand.

(10 semester periods)

603 **Medical Dictation**

Definition, derivation, and explanation of medical terms and phrases; medical vocabulary with shorthand outlines; dictation of medical materials, medical office forms.
Prerequisites: Shorthand 1 and Typewriting.

(10 semester periods)

609.1 **Stenotype Theory 1**

Fundamental theory and principles of Stenotype-machine shorthand; development of basic skills and techniques in operating machine.

(5 semester periods)

609.2 **Stenotype Theory 2**

Continuation of principles and theory of Stenotype-machine shorthand; further development of basic skills and techniques; dictation and speed building.
Prerequisite: Stenotype 1, or equivalent.

(5 semester periods)

SUBJECT NO.

609.3 **Stenotype Theory 3**

Review and mastery of principles of theory of Stenotype-machine shorthand; speed building and development; dictation, transcription.
Prerequisite: Stenotype 2 and Typewriting, or equivalent.

(5 semester periods)

612 **Stenotype Dictation**

Speed-building techniques and skills; general and business dictation material; 60 to 120 words per minute.
Prerequisites: Stenotype 3 and Typewriting, or equivalent.

(10 semester periods)

615 **Stenotype Theory Review**

Review of theory and principles of machine shorthand; special emphasis upon abbreviations and techniques in the operation of the machine.
Prerequisites: Experience in machine shorthand.

(5 semester periods)

616 **Stenoscript**

Basic principles and theory of Stenoscript ABC shorthand; development of basic skills and techniques in use in an alphabetic shorthand.

(5 semester periods)

618.1 **Typewriting 1**

Keyboard; machine parts; typewriting techniques; fundamental skills; timed writing; minimum speed of 25 words per minute.

(5 semester periods)

618.2 **Typewriting 2**

Review of basic techniques and skills; development of speed and accuracy; personal use typewriting; timed writing; minimum speed of 30 words per minute.
Prerequisite: Typewriting 1, or equivalent.

(5 semester periods)

618.3 **Typewriting 3**

Review of basic techniques and skills; accuracy and speed development; business letters and forms; timed writing; minimum speed of 40 words per minute.
Prerequisite: Typewriting 2, or equivalent.

(5 semester periods)

618.4 **Typewriting 4**

Review and practice of techniques and skills; specialized business forms; emphasis on speed and accuracy in production work; speed building; timed writing; minimum speed of 50 words per minute.
Prerequisite: Typewriting 3, or equivalent.

(5 semester periods)

SUBJECT NO.

618.5 **Typewriting 5**

Application of typewriting techniques and skills to meet business standards; legal and statistical typing; duplicating processes; transcribing machines.
Prerequisite: Typewriting 4, or equivalent.

(5 semester periods)

619.1 **Medical Typewriting 1**

Introductory; includes learning the keyboard and the various machine parts and developing skill in typewriting, using the correct techniques; develops speed and accuracy; applies typing skill to simple problems involving preparation of medical letters, rough drafts, and tabulations; develops ability to type at a minimum of 25 words per minute for 3 minutes with no more than 3 errors.

(5 semester periods)

619.2 **Medical Typewriting 2**

Continues skill development with intensive application of typing skill to medical business letters, tabulations, and reports; develops ability to type at a minimum rate of 30 words per minute for 5 minutes with a maximum of 5 errors.
Prerequisite: Medical Typewriting 1, or equivalent.

(5 semester periods)

619.3 **Medical Typewriting 3**

Continues skill development; includes typing on medical forms and of mailable letters; completion of form letters; typing from rough drafts; typing statistical copy.
Prerequisite: Medical Typewriting 2, or equivalent.

(5 semester periods)

619.4 **Medical Typewriting 4**

Continues improvement of basic skills; emphasizes increased production of materials for medical offices; develops ability to type at a minimum rate of 50 words per minute for 5 minutes with a maximum of 5 errors.
Prerequisite: Medical Typewriting 3, or equivalent.

(5 semester periods)

621 **Filing**

Fundamentals of alphabetic, Variadex, Triple Automatic, Soundex, and numeric systems of filing; related systems.

(5 semester periods)

624 **Office Practices and Procedures**

Office organization and routines; office procedures; telephone usage; mail handling; filing; duplicating processes; transcribing machines; occupational information; techniques for securing employment.

(5 semester periods)

SUBJECT NO.

625 **Office Practices and Procedures – DMV-Clerk**

Introduction to office organization and routines in an automobile dealership; office procedures; registration requirements; DMV regulations; transfer of ownership; filing; handling of mail.

(5 semester periods)

626 **Office Practices and Procedures – Library Clerk**

Clerical work covering processes and procedures of library involving: acquisition, processing, circulation, and maintenance.
Prerequisites: Applicant must have passed typing test at 45 words per minute with a maximum of 3 errors; keypunch training is optional; ability to benefit from course to be determined by instructor.

(5 semester periods)

627 **Legal Procedures for Secretaries**

California procedural law and forms; preparation of court forms, pleadings, and documents; definition and explanation of legal proceedings and procedures.

(5 semester periods)

630 **Insurance Office Procedures**

General insurance office practices and procedures; insurance terminology; insurance records; public relations; correspondence and reports; clerical problems in the insurance profession.

(5 semester periods)

633 **Medical Laboratory Procedures**

Use and care of microscope, centrifuge, and other scientific equipment; methods of sterilization of instruments; theory and demonstration of tests as performed in doctors' offices.

(5 semester periods)

636 **Medical Office Procedures**

Medical office practices and procedures; doctors' abbreviations, symbols, diagnostic procedures; medical records; public relations; correspondence and reports; doctor assistance; clerical problems in the medical profession.

(5 semester periods)

638 **Medical Record-Keeping**

Introductory; develops a basic understanding of the handling of business and medical records; includes practice in the pegboard system of bookkeeping.

(5 semester periods)

640 **Hospital Admitting Procedures**

Office practices and procedures used to admit hospital patients; medical terminology; personal relationships and ethics; hospital and insurance forms; application of typewriting skills to completion of hospital forms; hospital interview techniques; telephone usage; filing; occupational information; techniques for securing employment.
Prerequisite: Ability to type 30 words per minute.

(10 semester periods)

SUBJECT NO.

641 **Medical Records Technician–I.C.D.A.**

Principles of coding diseases; surgical operations; accidents; poisonings; violence; diagnostics and other therapeutic procedures; special conditions and examinations without sickness; symptoms; ill-defined conditions; classification of live-born infants according to type of birth; stillbirths; causes of death.

(5 semester periods)

642 **Secretarial Procedures**

Secretarial skills; secretarial accounting; general office procedures; business law; human relations; economics; office management; review as preparation for CPS examination.

(5 semester periods)

645 **PBX Switchboard Operation**

Fundamentals of PBX switchboard operation; practice for operation of a small switchboard; telephone courtesy; incoming and outgoing calls; messages; duties of receptionist.

(5 semester periods)

660-699 TRANSPORTATION AND TRAFFIC MANAGEMENT

661 **Principles of Traffic Management**

Survey of all phases of traffic management; organization and function of industrial-traffic departments; shipping, receiving, warehousing, claims, choice of carriers, accessorial services; terminology; governmental regulations; procedures in making freight rates and publication of tariffs.

(5 semester periods)

662 **Terminal Operations**

Terminal operations; systems and procedures; cost and production standards; material handling; claims; overshort and damage procedures; service; supervising qualifications; employee-supervisor relations.

(5 semester periods)

664.1 **Motor Rates 1**

Use of freight classifications and tariffs of the California Public Utilities Commission and California Motor Carriers through rate problems involving application of rules and regulations.
Prerequisite: Traffic Management, or equivalent.

(5 semester periods)

664.2 **Motor Rates 2**

Diversified rate problems involving motor carriers, Rocky Mountain Motor Tariffs Bureau freight-rate tariffs, federal regulations, and current traffic matters.
Prerequisites: Motor Rates 1, Rail Rates 1 and 2, or equivalent.

(5 semester periods)

667.1 **Rail Rates 1**

Use of freight classification and California rail freight tariffs through practical rate problems involving all phases of rating; state and federal regulations.
Prerequisites: Traffic Management and Motor Rates 1, or equivalent.

(5 semester periods)

SUBJECT NO.

667.2 **Rail Rates 2**

Diversified rate problems involving rail transcontinental freight-rate tariffs; construction of combination rates, federal regulations, and current traffic matters.
Prerequisite: Rail Rates 1, or equivalent.

(5 semester periods)

667.3 **Rail Rates 3**

Diversified rate problems involving shipping in Mountain-Pacific territory; rail accessorial services; routing, federal regulations, and current traffic matters; freight forwarder organization, operation, regulation, and rates.
Prerequisites: Rail Rates 1 and 2, or equivalent.

(5 semester periods)

668 **Air Cargo Transportation**

Instruction in all phases of air transportation; joint passenger and freight carriers; domestic rates and regulations; international rates and regulations; terminal procedures; expediting techniques; Civil Aeronautics Act of 1938.

(5 semester periods)

669 **Household Carriers**

Instruction in the use of household carriers; the techniques employed in estimating charges; the proper rates to assess; the relationship between industry and carrier; proper sales approach; the problems confronting both industry and carrier; the types of articles that can be moved by the carrier.

(5 semester periods)

670 **Rate Making and Adjustment Procedure**

Conference and bureau methods of rate making; Reed-Bulwinkle Bill; shipper rate proposals; carrier rate proposals; carrier procedures for disposition of dockets; area of reasonableness; features of alleged prejudice and discrimination; rate relationships; effects of competition; rules of rate making.

(5 semester periods)

672 **Passenger Travel and Reservation**

Development of air travel; air geography; time zones; time tables; itineraries; fares; ticketing; surface transportation; hotel and tour reservations; travel insurance.

(5 semester periods)

676 **I.C.C. Practice and I.C. Law**

Rules of practice before the Interstate Commerce Commission; rules of evidence; canons of ethics; review of principles; interpretation of interstate commerce laws from federal court cases and I.C.C. decisions; preparation for practice before the I.C.C.
Prerequisite: Permission of instructor.

(5 semester periods)

679 **Foreign Freight Forwarding**

Steamship bookings; air freight; documentation, consular invoices; export declarations; export licenses.

(5 semester periods)

SUBJECT NO.

682 ***Freight Forwarder Rates***

History, regulation, and organization of Freight Forwarded Services; construction, application, and use of freight forwarder tariffs through rate problems.

(5 semester periods)

683 **Freight Claims**

Liability of freight claims; damage claims; carriers' claims; laws affecting freight loss and damage by railroads, motor trucks, air and water carriers, and railway and air express.

(5 semester periods)

685 **International Trade**

Interchange of goods between countries; duties; customs regulations; monetary values; consular invoices; letters of credit; insurance for foreign shipments; steamship and airline bookings; ocean bills of lading; air bills.

(5 semester periods)

688 **Regulation of Transportation**

Federal laws applicable to domestic land and water carriers; designed for both shippers and carriers.

(5 semester periods)

692 **Labor Relations in Transportation**

Economics of the labor market; collective bargaining; grievance procedures; arbitration; case work application.

(5 semester periods)

694 **Transportation Economics**

Organization, services, operation, practices, and regulation of transportation enterprises; preparation for the examinations of the American Society of Traffic and Transportation.

(5 semester periods)

697 **Transportation Sales**

Development of effective selling techniques in the transportation business; the selling profession; qualifications of a freight salesman; sales methods for use in calling on potential shippers; organization, demonstration, and follow-up in selling.

(5 semester periods)

700-774 CIVIC AND PUBLIC SERVICES EDUCATION

SUBJECT NO.

700-705 BOAT SAFETY

702.1 **Seamanship and Boat Safety 1**

Types of marine engines; operation, maintenance, and repair of small sea-going craft in coastal waters; nautical terminology; tides and currents; aids to navigation; piloting and use of charts; safety at sea; laws, rules, and licenses governing small craft.

(5 semester periods)

702.2 **Seamanship and Boat Safety 2**

Practical study program for the small boat sailor, or yachtsman; for the mariner already familiar with the basics of small-boat handling; navigation and safety; review of fundamentals of latitude and longitude; speed/time distance computations; magnetic compass, charting; lines of position; radio aids; use of tides and currents tables; chart work and cruising problems.

(5 semester periods)

703 **Fundamentals of Sailing**

Recognition of sailboat terms and symbols; identification and classification of sailboats; basic techniques of boat handling; wind and weather; knots and use of line and rope; cruising in local waters; racing techniques; care and maintenance of boats and sails.

(5 semester periods)

704 **Marine Piloting and Celestial Navigation**

Fundamentals, terms, concepts, tools, and procedures of terrestial and celestial navigation; extensive application of course materials in resolving navigational problems.
Prerequisite: Basics of small boat handling, visual navigation, boat safety, and seamanship.

(5 semester periods)

705 **Charter Boat License Preparation (Coast Guard Ocean Operator's License)**

Practical training in boat operations relating to charter boat and fishing industry, necessary to obtain Coast Guard commercial licensing; emphasis on piloting, navigation, emergency measures.
Prerequisite: Previous class work in seamanship and boat safety; experience as deck hand is desirable.

(10 semester periods)

706-709 CIVIL DEFENSE

706 **Radiation, Health and Safety**

Radiological hazards and phenomenology of the atom and hydrogen bombs; use of geiger counter, ion chamber, walkie-talkie, and two-way radio.

(5 semester periods)

707 **Individual and Family Survival**

Possible reactions of individuals and family groups to great danger; desirable precautions; instructions regarding the most effective measures to be taken in such an emergency.

SUBJECT NO.

710-719 DRIVER EDUCATION

711 **Driver Education**

Mechanical features of the automobile; approved driving practices, responsibilities of the car owner; California Vehicle Code; basic city traffic ordinances; preparation for driver's license examination.

(5 semester periods)

712 **Driver Instruction**

Provides information and experience in driving with emphasis on consumer auto mechanics; *California Motor Vehicle Code*; responsibilities of the vehicle owner; driving practices; city traffic ordinances; preparation for the driver's license examination; behind-the-wheel instruction.

(5 semester periods)

713 **Personal Traffic Safety**

Proper care and operation of the automobile; duties and responsibilities of the driver, with emphasis on the following: laws of motion, review of the California Motor Vehicle Code; causes and effects of automobile accidents; development of understanding of and respect for the role of the traffic officer; stimulation of interest in improvement of driving attitudes and habits; behavioral and perceptual defensive-driving technique.

720-729 FIRE SCIENCE

721 **Fire Chemistry**

Fundamentals of chemistry pertaining to fire fighting; fire hazards; fire prevention, extinguishing methods; safety practices.

(5 semester periods)

723 **Fire Company Administration**

Practical application of records, reports, and company training; the history and authority of the fire company; the municipal fire problem; distribution and routine maintenance of fire department buildings and equipment; fire alarm systems and communications procedures; distribution of personnel; the principles and methods used in supervising, training, and instructing fire department personnel; water supply for the fire service, including the principles of hydrant distribution; the development of safe driving and working practices, and the role of the supervisor in administering a safety program; modern fire-fighting practices and techniques; prefire planning and postfire training; work organization; discipline and morale.

(10 semester periods)

725 **Fire Science**

Los Angeles City fire prevention code and regulations pertaining to fire prevention; standards of operation involving public safety; fundamentals of fire suppression.

(10 semester periods)

SUBJECT NO.

726 **Fire Science – Hydraulics**

Review of basic mathematics; hydraulic laws; formulas as applied to the fire service; application of formulas and mental calculations to hydraulic problems; water supply problems; N.B.F.U. requirements for pumpers.

(5 semester periods)

727 **Fire-Fighting Techniques**

Modern fire-fighting practices and procedures; application of scientific principles to fire suppression; special emphasis on prefire planning; development and use of command tactics; analysis of fire by occupancy type.

(10 semester periods)

730-734 LEADERSHIP TRAINING

731 **Leadership Training**

Characteristics of leadership; leadership techniques as applied to group activities; study of human behavior; mass psychology; practice in public speaking; parliamentary procedure.

(5 semester periods)

732 **Hunter Safety Instructor Training**

Instruction and training for junior hunter safety program; general safety; care and use of firearms.

(2½ semester periods)

735-759 POLICE SCIENCE

735 **Introduction to Law Enforcement**

Introduction to police science. A basic course dealing with criminal processes and procedures; police history; organization of local, state, and federal police agencies; community composition; structure of modern police departments; framework for handling problems of juvenile delinquency; traffic control; functions of detectives and patrols; review of occupational opportunities and career requirements.

(5 semester periods)

736 **General Police Information**

Intensive study of all Los Angeles Police Department manuals; training bulletins, orders, procedures, and functions; operations of federal, state, county, and city governments in reference to law enforcement.

(5 semester periods)

738 **Police Administration and Supervision**

Structure of a modern police department; application of administrative methods in the fields of supervision, planning, organization, direction, coordination, reporting, budgeting, personnel, training, juvenile, patrol, and records; the penal code and general laws of California, including the latest decisions of the California courts applicable to police work.

(10 semester periods)

740 **Police Report Writing**

Techniques of presenting information; analysis of Manual of Reports; essential elements of special reports; distribution of reports.

(5 semester periods)

SUBJECT NO.

742 **Police Law and Evidence**

Penal code, general laws, California Vehicle Code; latest court decisions applicable to police work; rules of evidence and admission of evidence as used in the California courts.

(5 semester periods)

744 **Police Science – Vehicle Code**

Development and organization of the California Vehicle Code; elements of specific sections; interpretation of statutes; rights and duties of peace officers under the code; related laws from other codes.

(5 semester periods)

746 **Police Science – Enforcement Practices**

Instruction and training for line officers at the functional level; small arms; short-wave radio; dispatching procedures; first aid and safety; criminal law; court procedures and reporting procedures.

(5 semester periods)

748 **Police Science – Investigation**

Instruction and training for investigators at the functional level; review of police law, courtroom practices, codes, records, and reporting procedures.

(5 semester periods)

750 **Police Science – Home and Plant Protection**

Care and use of firearms; legal aspects; training of watchmen and security guards.

(5 semester periods)

752 **Criminal Process and Procedure**

Criminal law; procedural statutes; rules applicable to court proceedings.

(5 semester periods)

753 **Civil Process and Procedural Law**

The courts of California, with special reference to trial court procedures and processes; processes and procedures observed by clerks in civil departments of courts, including papers to be filed, processes to be issued, and related subjects.

(5 semester periods)

754 **Police Science – Penal Code**

Organization and content of the penal code and general laws of the State of California; capacity, intent, attempts, and laws of arrest; leading decisions of California courts on penal statutes, plus the precedent set and the implication of the cases; essential elements of many crimes, including kidnapping, forgery, perjury, bribery, and abortion violation; licensing provisions; exemptions of the Dangerous Weapon Control Law.

(5 semester periods)

756 **Legal Procedures for Juvenile Traffic**

Principles of the due process of law; use of codes and other legal references; rules of evidence; basic principles of criminal law; effect of juvenile-court law hearings; training methods, techniques, and legal procedures used in conducting a court trial.

(2½ semester periods)

SUBJECT NO.

760-769 CIVIC EDUCATION — GENERAL

761 **City Government**

Structure and functions of city government in relationship to county and state government; city charter; municipal code; political evaluations of city government in Los Angeles.

(2½ semester periods)

764 **County Government**

Structure and functions of county government in relation to city and state government; legal basis; levels of government; policy determination; general functions.

(2½ semester periods)

765 **Basic Animal Control**

Laws governing care, control, licensing and impounding of animals; ordinances affecting Department of Animal Regulations.

(5 semester periods)

766 **Principles of Personal Management**

Designed for officers and inmates of detention facilities; principles of personal management; personal adjustment skills; systematic planning of personal growth within various areas of everyday life.

(5 semester periods)

767 **Basic Civil Service Information**

Designed to provide students with a better understanding of Civil Service Systems and their operation; the structure, rules, and procedures of the Los Angeles County Civil Service Commission, with emphasis on the practical application of those governing appointments, including promotions, training, performance evaluation, and disciplinary actions.

(2½ semester periods)

768 **Municipal Civil Service Rules and Procedures**

Review of the rules and procedures of the Los Angeles City Civil Service Commission; emphasis on the practical application and interpretation of the rules and procedures governing appointments, promotions, discharges, layoffs, leaves, service ratings, transfers, and appeals; designed for personnel currently employed by the City of Los Angeles.

(2½ semester periods)

769 **Crime, Law Enforcement and You**

Fundamentals of law and the role of law agencies, including the courts; areas of cooperation and conflict between peace officers and the community; evaluation of modern law enforcement.

(5 semester periods)

770-774 GERONTOLOGY

770 **Gerontology**

Topics of particular concern to older adults, including those that relate to mental and physical aspects of aging; use of community resources; participation in civic activities.

(5 semester periods)

771 **Planning for Retirement**

Fundamentals of establishing a constructive life pattern for retirement; problems of economics, health, housing, leisure time.

(2½ semester periods)

SUBJECT NO.

772 **Leadership Training for Older Adults**

Leadership techniques for older adults; attitudes and problems affecting this age group; communication skills.

(5 semester periods)

773.1 **Nutrition and Health for the Older Adult**

Nutrition as related to maintaining the health of older people; planning and preparing well-balanced meals for one or two persons at minimum expense.

(5 semester periods)

773.2 **Aging Process–Body Dynamics**

Exercises designed especially for the aged; body changes in the aging process; beneficial influence of physical activity on health.

(5 semester periods)

773.3 **Consumer Education for Older Adults**

Emphasis on knowledge for senior citizens relating to budgeting, wise buymanship, protection from fraud and quackery, safety; consumer grievance resources and legal rights.

(5 semester periods)

774.1 **Understanding the Aged – General Orientation**

Social and personal factors affecting the aging, related to problems of the worker with this age group.

(5 semester periods)

774.2 **Understanding the Aged – Leisure Time Needs**

Analysis of needs; methods and techniques of broadening programs. Use of community resources.

(5 semester periods)

774.3 **Management of Homes for the Aging**

Analysis of methods concerning successful management of sheltered-care homes for the aging.

(5 semester periods)

775-799 ELEMENTARY AND CITIZENSHIP EDUCATION

SUBJECT NO.

775-784 ELEMENTARY SUBJECTS

775 **Adult Basic Education**

Audio-lingual approach to reduce illiteracy; emphasis on reading, speaking, writing, spelling, and printing; correct usage of English grammar; concept of arithmetic; introduction to social science.

776.1 **Elementary Subjects 1**

Introduction to basic skills; reading printed and written words; spelling; practice in correct oral speech habits; cursive writing – capital and small letters and numerical figures; concept of numbers; addition and subtraction.

776.2 **Elementary Subjects 2**

Expansion of basic reading vocabulary; basic spelling list; singular and plural in oral and written language; practice in cursive writing; multiplication; history and geography of Los Angeles.

776.3 **Elementary Subjects 3**

Mastery of basic primary vocabulary; development of reading speed; capitalization and punctuation; legibility in cursive writing; division; study of city and county government.

776.4 **Elementary Subjects 4**

Reading for comprehension, speed, and interpretation; master of basic fourth-grade spelling list; letter forms, sentence recognition, irregular verbs; speed in cursive writing; addition, subtraction, multiplication, and division of common fractions; history and geography of California.

776.5 **Elementary Subjects 5**

Review of basic reading skills; practice in reference skills; mastery of basic fifth-grade spelling list; simple sentence recognition; introduction to parts of speech; addition, subtraction, multiplication, and division of decimals; measurements; problem solving; study of state government; maps and simple charts.

776.6 **Elementary Subjects 6**

Intensive review and practice of basic reading skills; introduction to use of library; review of basic spelling lists; parts of speech and use of irregular verbs; organization of sentences and paragraphs; mixed numbers – fractions and decimals; percentage; basic geometric forms; history and geography of the United States; maps and charts.

776.7 **Elementary Subjects 7**

Development of reading and writing skills; sentence structure, punctuation, and spelling; practice and review of fractions – common decimal; percentage; measurement; problem solving related to practical, everyday experiences; geography and history of the world as related to living in the United States; maps and charts.

776.8 **Elementary Subjects 8**

Reading, spelling, grammar, and punctuation; use of library; review of basic spelling lists; letter writing; correct usage and speech habits; mathematics review; federal government; review of history and geography of the United States; review of state and local government.

777 **Arithmetic Fundamentals – Elementary**

Application of arithmetic to everyday life; counting and writing numbers; addition, subtraction, multiplication, division of whole numbers, fractions, and decimals; per cent.

SUBJECT NO.

778 **Spelling**

Correction of basic spelling errors; word roots, prefixes, suffixes; spelling rules; importance of correct pronunciation and basic spelling lists, including "100 Demons"; use of the dictionary.

779 **Remedial Reading**

Practice in improving reading skills and comprehension.

782 **English – 8th-Grade Level**

Review of principles of elementary English; extensive practice in oral and written expression.
Prerequisite: Elementary English 6 or 7.

783 **English Review and Reading Improvement – Elementary**

Simple sentence construction, parts of speech, paragraphing, capitalizing, punctuation, abbreviations, alphabetizing, outlining, using dictionary, letter-writing, comprehension skills, vocabulary building, location skills, recreational reading.

784 **Vocational Rehabilitation – Elementary**

Reading, spelling, grammar, and punctuation; letter writing; correct usage and speech habits; arithmetic; acceptable work habits.

785-789 CITIZENSHIP

786 **Citizenship**

Preparation for naturalization; important events in United States History; the Constitution and its historic background; study of the organization, powers, and duties of federal, state, and local governments; understanding and appreciation of our American culture, institutions, and ideals; emphasis on the privileges, duties, and responsibilities of citizenship.
Prerequisite: English as a Second Language 5, or equivalent.

790-799 ENGLISH AS A SECOND LANGUAGE

791.1 **English as a Second Language 1**

Speaking, reading, and writing English for the immediate needs of non-English-speaking adults; developing the ability of expression, using a present tense, present progressive, simple past, and simple future; learning the elementary structure of affirmative, interrogative, and negative statements. Easy, graded lessons in English based on daily experiences.

791.2 **English as a Second Language 2**

Material based on language needs which arise in everyday personal and group experiences; further development of oral skills; new work, consisting of compound statements, correct word order, past progressive verb usage, the comparison of adjectives, and writing informal notes.
Prerequisite: English as a Second Language 1, or equivalent.

791.3 **English as a Second Language 3**

Oral and written lessons leading to an understanding of the local community; oral drills on usage; new work based on the use of the perfect tenses; passive voice; the comparative forms of adverbs; complex sentences; writing social and business letters; filling out business forms.
Prerequisite: English as a Second Language 2, or equivalent.

SUBJECT NO.

791.4 **English as a Second Language 4**

Constant drill and use of oral skills; new work, including verb agreement, direct and indirect discourse, simple conditional sentences, introduction of the use of the gerund and infinitive, compound sentences and questions, and preparation of short compositions.
Prerequisite: English as a Second Language 3, or equivalent.

791.5 **English as a Second Language 5**

Review of fundamentals with emphasis on oral skills; new work based on the use of complex verb tenses, sequence of tenses, noun and adjective and adverbial clauses, infinitives, gerunds, and participles; review of business forms.
Prerequisite: English as a Second Language 4, or equivalent.

791.6 **English as a Second Language 6**

Development of civic responsibility based on an understanding of the history, growth, and problems of the city, the state, and the nation; use of oral language skills through talks and reports; written work developed to include paragraphing, outline forms and summarizing; drills to increase speed and comprehension in speaking, reading, and writing English.
Prerequisite: English as a Second Language 5, or equivalent.

791.7 **English as a Second Language 7**

Over-all review of grammar; continued emphasis on spoken English; training in note-taking, in developing and presenting oral reports, and in composing business and social letters; understanding of American customs and social etiquette; appreciation of United States History and Government.
Prerequisite: English as a Second Language 6, or equivalent.

794 **Accent Removal and Speech Improvement**

Foreign accent removal; speech development through English rhythms, correct pronunciation, and fluency.
Prerequisites: English as a Second Language 1-4, or equivalent.

800-834 FINE ARTS AND CRAFTS EDUCATION

SUBJECT NO.

800-804 CRAFTS

801.1 **Jewelry 1**

Objects made for decorative wear; construction of jewelry from materials suitable for design and function; shaping, etching, oxidizing, soldering, and polishing metals; gem cutting; enameling and mounting; emphasis on good design, craftsmanship, materials; field trips.

(10 semester periods)

801.2 **Jewelry 2**

Creative use of basic jewelry skills; technical and artistic application of silversmithing and gem developing; emphasis on design, composition, combination of materials, and fine craftsmanship.

(10 semester periods)

804.1 **Lapidary 1**

Grinding, polishing, faceting, and mounting precious, semi-precious, and ornamental stones; recognizing, procuring, and developing a gem, or equivalent.

(10 semester periods)

804.2 **Lapidary 2**

Perfection of basic lapidary skills; classify, mount, and exhibit gems and stones; experiment with and display creative gem ornamentation, showing utility and craftsmanship.

(10 semester periods)

805-834 FINE ARTS

806 **Art Appreciation**

Analysis of the art of significant periods in proper social and historical setting; consideration of the contribution of art to civilization, with emphasis on aesthetic and human values.

(5 semester periods)

808 **Afro-American Art**

Analysis of significant types of Afro-American Art in proper social and historical setting with emphasis on media; development of personal creativeness and possible participation in community projects and exhibitions.

(5 semester periods)

809 **Basic Art and Still Life**

Fundamentals of drawing and painting; depiction of form and space by means of line, dark and light, color, perspective, personal interpretation; concepts and principles of composition; study of techniques; development of personal creative abilities.

(10 semester periods)

812 **Landscape and Marine Painting**

Drawing and painting, using nature, buildings, and boats as subjects; study of types of composition and perspective; use of color; development of personal creativeness and participation in community projects and exhibitions.

(10 semester periods)

SUBJECT NO.

815 **Portraiture**

Drawing and painting of figure and head from casts, models, memory, and imagination; study of figure in action; modeling of form and disposition in space; emphasis on form through controlled light; detailed analysis of features of head; study of background and accessories; problems of composition and techniques of portrait painting.

(10 semester periods)

818 **Contemporary Painting**

Elements of design; line, space, volume; principles of color and their application; training in observation and its translation into picture structure, stressing the individual's creative approach.

(10 semester periods)

821 **Oil Painting**

Techniques of oil painting on canvas and masonite or other supports; underpainting and glazing; impasto painting; palette knife painting; color theory and phenomena; analysis of compositional approaches; development of the student's personal creativeness; still life; landscapes; portraits.

(10 semester periods)

824 **Water Color Painting**

Techniques of water color painting; selection and care of equipment; color study and composition exercises; creative painting; still-life and landscape water color; framing and exhibition problems.

(10 semester periods)

825 **Introduction to Japanese Art**

Fundamentals of Oriental painting and brush techniques; depiction of form and space by means of line, dark and light; personal interpretations, concepts, and principles of composition; development of personal creative abilities.

(5 semester periods)

826 **Printmaking**

Fundamentals of beginning printmaking; interpretation of line, form, dark and light, texture and color in various raised or block-printing techniques; concepts and principles of good design and composition as related to printmaking; development of individual creative abilities.

(5 semester periods)

827.1 **Ceramics 1**

Design, construction, and decoration of clay forms; building, throwing, casting, modeling, and decorating clays; mixing and applying glazes; loading and drawing the kiln; emphasis on function and quality of design.

(10 semester periods)

827.2 **Ceramics 2**

Advanced design, construction, and decoration of clay forms; new methods of building, throwing, casting, modeling in a variety of clays; mixing special glazes; emphasis on creativeness in design.

(10 semester periods)

SUBJECT NO.

827.3 **Ceramics 3**

Clay as a creative media; advanced techniques in contemporary ceramic problems; emphasis on individual creative design, color, and texture and application of glazes.

(10 semester periods)

828 **Bonsai – Trees and Landscapes**

The art of miniature trees and landscapes. The training to develop sculpture in miniature trees.

(5 semester periods)

834 **Sculpture**

Modeling in clay and forming synthetics in lead; carving with various materials; constructing with metal wire and cement; developing mastery in use of tools appropriate for each material; working with three-dimensional design and composition; finishing and mounting of pieces.

(10 semester periods)

835-884 HEALTH EDUCATION

SUBJECT NO.

835-839 FIRST AID

836[PI] **Standard First Aid – Red Cross**

Accident prevention; emergency treatment; resuscitation; transportation of injured; home emergencies. Red Cross Certificate issued upon satisfactory completion.

837 **Advanced First Aid – Red Cross**

Review of standard course; legal aspects; roller bandages; traction splints; practical first aid and problems as related to Civil Defense. Advanced Red Cross Certificate issued upon satisfactory completion.
Prerequisite: Current Standard Red Cross Certificate.

840-849 PHYSICAL EDUCATION

840 **Physical Education – Men**

Physical conditioning and body building; correction of minor postural defects; apparatus and equipment activities; related health problems.

842.1 **Physical Education 1 – Women**

Scientific exercises and rhythmic activities; development of co-ordination, flexibility, rhythm, poise; correction of minor postural defects; apparatus activities; related health problems.

842.2 **Physical Education 2 – Women**

Review and continuation of program introduced in Physical Education 1; increase in tempo, intensity, duration, and difficulty of activities; health counseling.

850-854 SWIMMING

850.1 **Swimming 1**

Fundamentals of water safety and swimming; relaxation, breath control, buoyancy, stroking, kicking; elementary diving.

850.2 **Swimming 2**

Review of Swimming 1; basic strokes; body control; safety techniques; diving.
Prerequisite: Swimming 1, or equivalent.

850.3 **Swimming 3**

Review of Swimming 2; advanced swimming skills, endurance, speed; advanced safety and life saving techniques.
Prerequisite: Swimming 2, or equivalent.

851 **Lifesaving – Senior Red Cross**

Lifesaving techniques; holds, carrying, resuscitation; water safety techniques; treading, disrobing in water, stroke variations; emergency equipment; transportation. Senior Red Cross Life Saving Certificate issued upon satisfactory completion.

[PI] This course is offered either as a regularly scheduled class or part of the PI program. See page xxvi.

SUBJECT NO.

855-874 HEALTH OCCUPATIONS

855 **Home Health Aid**

Theory and clinical experience related to the duties and responsibilities of the Home Health Aid in the patient's home; designed to meet personal-care needs resulting from illness or disability.

(10 semester periods)

856.1 **Nursing – Basic Nursing Procedures**

Basic nursing procedures, ethics, medical terminology. Hospital affiliation required, if course is terminal.

(5 semester periods)

856.2 **Nursing – Basic Nursing Theory**

Basic nursing theory; includes knowledge of anatomy and physiology, nutrition and diet therapy, medical terminology, and nursing procedures. Hospital affiliation required, if course is terminal.
Prerequisite: Nursing – Basic Nursing Procedures.

(5 semester periods)

856.3 **Nursing – Conditions of Illness**

Study of conditions of illness, including topics relating to community health, microbiology, medical and surgical nursing, and advanced nursing procedures. Hospital affiliation required.
Prerequisites: Nursing – Basic Nursing Procedures and Basic Nursing Theory.

(5 semester periods)

856.4 **Nursing – Maternal and Child Care**

Obstetrical nursing, pediatric nursing, pharmacology, advanced nursing procedures, and related topics. Hospital affiliation required.
Prerequisites: Nursing – Basic Nursing Procedures, Basic Nursing Theory, and Conditions of Illness.

(5 semester periods)

856.5 **Nursing – Hospital Procedures and Practices, Section 1**

A review of nursing procedures involving bedside care of the patient in the hospital, and of supervised clinical practices. Hospital affiliation required.
Prerequisites: Nursing – Basic Nursing Procedures, Basic Nursing Theory, Conditions of Illness, and Maternal and Child Care.

(5 semester periods)

856.6 **Nursing – Hospital Procedures and Practices, Section 2**

Hospital procedures and practices, including supervised clinical practices and advanced nursing procedures. Hospital affiliation required.
Prerequisites: Nursing – Basic Nursing Procedures, Basic Nursing Theory, Conditions of Illness, Maternal and Child Care, and Hospital Procedures and Practices, Section 1.

(5 semester periods)

858 **Geriatric Nursing**

Theory of and practice in the care of the geriatric patient; study includes basic nursing care, anatomy and physiology, medical terminology, and training to encourage and aid in developing independence of patient's activity despite his disabilities.
Prerequisite: Nursing – Basic Nursing Procedures.

(5 semester periods)

SUBJECT NO.

859 **Medical Terminology**

Facts of general structure; function of different body organs and systems; medical terms related to these organs and to the more common diseases and treatments, including surgery; analysis of medical terms; doctors' abbreviations and symbols; spelling, pronunciation and understanding of medical and surgical teams.

(10 semester periods)

860 **Inhalation Therapy Technician**

Skills and techniques necessary for successful performance as inhalation therapy technician; basic principles of ventilatory care; clinical practices.

(25 semester periods)*

861 **Operating Room Technician**

Duties and responsibilities of the operating room technician; specific operative procedures; surgical preparation; postoperative management.
Prerequisite: Practical nursing certificate, LVN license or RN license, or 6 months of hospital experience.

(10 semester periods)

862 **Dental Assistant**

Routine dental office procedures, including care of dental office and equipment; dental office management; chair assisting; dental anatomy and pathology; anesthesia and oral surgery; bacteriology and sterilization; dental roentgenology; oral hygiene and periodontia; diet and nutrition; orthodontics; pharmacology.

(10 semester periods)

864 **Physical Therapy Aide**

Philosophy of rehabilitative care and physical therapy; diseases normally treated in the physical therapy department; study of anatomy, physiology, medical terminology, physics, body alignment and theory of exercise; clinical practices to include procedures, massage, exercise, and use of equipment.

(10 semester periods)

865 **In-service Training for Nursing Personnel**

Review of necessary nursing procedures, medical terminology, new concepts, and methods of patient care.

(5 semester periods)

866 **Hospital Ward Clerk**

Medical terminology; duties and responsibilities of the ward clerk; transcribing and checking orders; requisitions; diagnostic procedures.

(10 semester periods)

867 **Registered Nurse Refresher**

Refresher course for inactive registered nurses planning to work in a clinical setting; review of new methods and concepts; preparation of nurses for return to active participation in the profession.
Prerequisite: Qualification as Registered Nurse.

(5 semester periods)

872 **Licensed Vocational Nursing–L.V.N.**

Principles of vocational nursing; emphasis on development of problem-solving skills; role of vocational nurse as fully qualified member of health team in the provision of patient-centered care.

(25 semester periods)*

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*Credits can be earned up to maximum number indicated.

SUBJECT NO.

875-884 HEALTH AND HYGIENE

876[PI] **Health and Hygiene**

Problems in personal and community hygiene; human anatomy and physiology; cause and control of diseases; nutrition; sanitation; mental health; effects of narcotics, dangerous drugs, tobacco, and alcohol.

(5 semester periods)

878 **Basic Public Health Entomology**

Literature, nomenclature, and entomotaxy of insects, including the historical importance of archeological and geological contributions.

(5 semester periods)

882 **Food Management and Sanitation**

Kitchen sanitation; food service and personal hygiene; preparation, handling, and storage of foods; menu planning for nutritious meals in quantity; dishwashing detergents and sanitizers; rodent and insect control; codes, regulations, and inspections.

[PI] This course is offered either as a regularly scheduled class or part of the PI program. See page xxvi.

885-999 HOMEMAKING EDUCATION

SUBJECT NO. *885-904 CLOTHING CONSTRUCTION*

886.1 **Clothing Construction 1**

Selection and use of commercial patterns, fundamental process of garment construction; fitting; elementary design and pattern development; wardrobe planning; grooming; elementary tailoring.

(10 semester periods)

886.2 **Clothing Construction 2**

Design; construction and use of personal patterns; pattern adjustment and development; fitting; wardrobe planning; grooming; fundamental process of construction and tailoring.
Prerequisite: Clothing Construction 1, or equivalent.

(10 semester periods)

886.3 **Clothing Construction 3**

Advanced design and pattern development; using personal patterns; fitting; advanced process of construction; advanced tailoring; grooming; wardrobe coordination.

(10 semester periods)

889 **Clothing Construction – Tailoring**

Techniques of tailoring; fitting and pressing; design related to tailored garments; use of personal pattern; pattern development; grooming; wardrobe planning.
Prerequisite: Clothing Construction, or equivalent.

(10 semester periods)

890 **Custom Clothing Design and Pattern Development**

Fundamentals of flat-pattern development, using basic patterns or slopers; development of designs for a variety of garments, including dresses, suits, coats, blouses, slacks and slips; specific exercises in pattern construction to develop variations of designs in sleeves, collars, skirts, blouses, and area details; encouragement of the application of principles of design and use of creativity.

(10 semester periods)

892 **Clothing Construction – Men's Tailoring**

Styling, detailing, construction, and fitting of men's garments; operation of factory-type power sewing machines.

(5 semester periods)

894 **Children's Clothing Construction**

Study of design, fabric and color suitable for children's clothing. Instruction in fitting; custom and short methods in construction of hand and machine sewing, finshes and trims. Use of commercial patterns and the development of original patterns.

(5 semester periods)

895 **Clothing Construction – Textile Arts**

Fundamental techniques of construction and care of hand-knitted garments; original design development and charting; study of yarns, ribbons, and other materials used in the making of such garments.

(10 semester periods)

898 **Clothing – Wardrobe Planning, Selection, and Care**

Basic guides for clothing selection; analysis of figure types and fitting problems; budgeting; evaluation of quality in textiles and workmanship; consideration of coor and design for the individual; care of garments; personal grooming.

(5 semester periods)

SUBJECT NO.

899 **Orientation of Personnel for Occupations and Businesses**

Practical guides for job interview techniques and etiquette; business relationships. Analysis of potentialities for personal improvement, including voice, speech, posture, and comportment; wardrobe inventory and clothing selection; clothing accessories and grooming for appropriate appearance; guidance for alterations, remodeling, and care; consumer information for intelligent spending.

(5 semester periods)

900 **Fashion Sketching and Illustration**

History of fashion illustration; study of proportion, mechanical construction of basic fashion figure; basic drawing procedures; basic garment shapes; contemporary styles and techniques; various modes of presentation for vocational training.

(5 semester periods)

905-915 CONSUMER EDUCATION

909 **Consumer Education**

Family expenditures related to foods, clothing, shelter, and home furnishings; time and money management.

(10 semester periods)

911 **Consumer Education – Home Management**

Food and nutrition; clothing and grooming; health and safety; family finance and time management; housing; family life and relationships.

(10 semester periods)

912 **Home Management (Also Housing Authority Contract & EOA-CAP)**

Fundamentals of home management related to homemaking skills and techniques, time and money management, foods and nutrition, meal planning and preparation, clothing construction and remodeling, home safety and sanitation, shelter and home furnishings, hygiene and grooming, and social skills.

(10 semester periods)

915 **Home Management and Family Care (Homemaker's Agency)**

Fundamentals of home management and family care; meal planning and preparation; efficient use of time, energy, and money; basic home repairs; home safety; home nursing; infant and child care.

916-925 FOODS

918 **Foods – Elementary Preparation and Nutrition**

Basic nutrition; economy of time, energy, and money in food preparation and serving.

(10 semester periods)

922 **Foods – Foreign and Domestic Cookery**

Selecting, purchasing, preparing, and serving regional and specialized foods, both domestic and foreign; planning menus for special groups and occasions.

(10 semester periods)

924 **Foods – Catering Methods for Home Use**

Instruction in planning, preparing, and serving, techniques and skills, using professional methods for gracious presentation and economy of time and cost; basic requirements of shopping, menu planning, recipes, nutrition, food composition, preparation, conservation; serving, lighting and decor.

(10 semester periods)

SUBJECT NO.

925 **Medical Diet Aide**

Application of the principles of basic nutrition to the planning and preparation of normal and modified diets required by anatomic and physiological abnormalities; care of materials and equipment; understanding of use of weights, measures, and terms related to the preparation of diets; hospital procedures and practice; job information.

(30 semester periods)*

926-929 HOMEMAKING, GENERAL

926 **Remedial Education – Homemaking**

Fundamentals of food preparation and service, health; safety; personal hygiene; hand sewing and related activities.

(10 semester periods)

928 **Home Nursing**

Theory and practice of nursing procedures; care of the injured, the sick, the aged, and of invalids; bed baths; nursing techniques used in the home.

(10 semester periods)

930-949 HOME FURNISHINGS

931.1 **Creative Design – Home Accessories**

Fundamentals of art elements in two- and three-dimensional design as they apply to the development and construction of functional and decorative articles for use in the home; instruction in the use of tools and materials related to mosaic, enameling, leather, textile, paper, wood, stone, and other current media.

(10 semester periods)

931.2 **Creative Stitchery**

Utilization of a variety of yarns, threads, cords, twines, fibers, braids and other linear materials, as well as bits of leather, jewelry, beads, shells, buttons, beans, gauze netting, etc.; instruction in the preparation of many kinds of stitches and combinations of stitches worked on background fabric, such as burlap, mesh, linen, denim, twills, or within specially controlled areas to produce wall hangings, pictures, cushions, mobiles, room dividers, and other decorator items.

(10 semester periods)

934 **Fabric Accessories for the Home**

Design and construction of fabric accessories for the home, including draperies, spreads, slip covers; design in relation to the function and placement of the accessories in the home.

(10 semester periods)

937 **Interior Decoration**

Plans for furnishing and redecorating the home, with emphasis on harmony of color, line, and design; selection of wall and floor coverings, and selection, use, and placement of furniture and accessories.

(10 semester periods)

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*Credits can be earned up to maximum number indicated.

SUBJECT NO.

940 **Floor Coverings – Hand Made**

Design and construction of various size floor coverings; hooked and braided rugs; materials, dyeing, and finishing; study of provincial and conventional design.

(10 semester periods)

945 **Furniture Refinishing and Home Improvement**

A course designed to help homemakers produce professional results; modern method of sanding; applying stain, finishes, white and gold antiquing; gold- and silver-leafing; refinishing old furniture; removing scratches and dents; including instructions in proper furniture and home care.

(10 semester periods)

950-954 MILLINERY

951.1 **Millinery 1**

Techniques and procedures used in renovating, remodeling, blocking, constructing, trimming, and copying; use of felts, straws, and other materials suitable for millinery; design development; pattern and block construction; study of millinery in relation to grooming and to wardrobe.

(10 semester periods)

951.2 **Millinery 2 – Advanced**

Advanced techniques and procedures for renovating, remodeling, blocking, constructing, trimming and copying; use of new materials in relation to contemporary grooming and to wardrobe.

(10 semester periods)

951.3 **Millinery 3 – Design**

Review of basic techniques and processes; original design and pattern construction; advanced study of millinery in relation to wardrobe.
Prerequisite: Millinery 1 and 2, or equivalent.

(10 semester periods)

955-999 PARENT AND FAMILY LIFE EDUCATION

955 **Preparation for Parenthood**

Cycle of human creation; normal function of pregnancy; exercises for purpose of physical fitness; posture and carriage; standards of obstetrical care; care of the baby.

(5 semester periods)

956 **The Preschool Child**

Physical, mental, social, and emotional growth and development; parent-child relationships. Discussion group method.

957.1 **Child Observation 1**

Preschool child; growth and development; observation, study, and discussion of activities and problems of 2–3 year olds.

(10 semester periods)

957.2 **Child Observation 2**

Preschool child; growth and development; observation, study and discussion of activities and problems of 3–4 year olds.

(10 semester periods)

SUBJECT NO.

957.3 **Child Observation 3**

Preschool child; growth and development; observation, study and discussion of activities and problems of 4–5 year olds.

(10 semester periods)

958 **Preparation for Kindergarten**

Learning patterns of the 4-, 5-year old child; parental role in preparation of the child for the formal school experience; demonstration, observation, and discussion.

(10 semester periods)

959 **The Elementary School-Age Child**

Characteristics of the school age child, parent-child relationships, home-school relations. Discussion group method.

(5 semester periods)

960 **The Junior High-Age Child**

Characteristics of adolescents of junior high school-age; parent-adolescent relationships; problems of parenthood at this age level; community problems affecting youth. Discussion group method.

(5 semester periods)

961 **The Senior High-Age Child**

Characteristics of adolescents of senior high school age; parent-adolescent relationships; problems of parenthood at this age level; community problems affecting youth. Discussion group method.

(5 semester periods)

963 **How The Child Learns**

School curriculum; the learning process; methods of home study; parent-school relationships.

(2½ semester periods)

964.1 **Modern Mathematics (Elementary) for Parents**

Development and interpretation of the "new mathematics." Introduction to sets; notation and vocabulary; number systems and numeration systems; rational numbers; overview of geometry and measurement.

(2½ semester periods)

964.2 **Modern Mathematics (Secondary) for Parents**

Patterns, concept of number; sets, number line; number operations; factors, multiples, primes; mathematical sentences; geometry; working with sets; systems of numeration.

(2½ semester periods)

965 **Parent's Role in Child's Reading**

Ways in which parents can help their children to read; individual differences and developmental needs; experiences which develop reading ability.

(2½ semester periods)

966 **Introduction to New English for Parents**

Explanation of the "New English" Program; use of communication skills; understanding sentence making and transformational grammar; instruction in composition.

SUBJECT NO.

968 **Understanding the Rapid Learner**

Characteristics of giftedness; school programs for the gifted; parent planning for the rapid learner. Guest speakers, lectures, discussions.

(5 semester periods)

969 **The Mentally Retarded Child**

Problems centering around the retarded child; his place in the family group, information on causes and treatment of mental deficiency.

(5 semester periods)

970 **The Physically Handicapped Child**

Types of physical handicaps; problems facing the child and his parents; education, rehabilitation, and community resources relating to the child.

(5 semester periods)

971 **Families With Special Needs**

Child care; health and safety; nutrition; money management; time management; home-school cooperation; use of community resources. (Designed for low-income parents)

(5 semester periods)

972 **Family Life Education**

Parental understanding of the process of human growth and maturation from infancy through adolescence; attitudes in sexual mores and effect upon family life; parental responsibility for sex education; role of the school in sex education.

973 **Parent, Child, and Community**

Orientation of parents and their children of primary school age regarding selected community resources.

974 **Modern Marriage and the Family**

Changing family patterns; intrafamily relationships; common strengths and conflicts in marriage and parent-child relationships; home management and family finance.

(5 semester periods)

975 **Creative Life for Women**

Exploration of woman's role and potential; guidance toward individual assessment; education for family crises.

(5 semester periods)

976 **The One-Parent Family**

Emotional, social, and financial problems in the one-parent family; individual and community resources for meeting needs.

(5 semester periods)

980 **Leadership Training in Human Relations**

Development of leadership for constructive intergroup relations within the community; attitudinal development of individual and family, communication skills, techniques of fostering positive human relations in the community.

(2½ semester periods)

SUBJECT NO.

981 **Volunteer Leadership**

Characteristics of leadership; leadership techniques as applied to group activities; practice in public speaking, program planning and committee activity.

(2½ semester periods)

982 **School Volunteer Training**

Philosophy of the volunteer program; volunteer-child and volunteer-school personnel relationships; development of skills in volunteer duties.

(5 semester periods)

985.1 **Introduction to Preschool Education**

Needs of the preschool child in nursery schools and day-care homes; plans, methods and materials for programs; teacher relationships.

(5 semester periods)

985.2 **Techniques Used in Preschool Education**

Skills and techniques for nursery schools and day-care homes; program planning, scheduling, administration.

(5 semester periods)

986 **Child Care Assistant**

Training for nonprofessional persons wishing to work as assistants in the field of child care; emphasis on observation and practice with preschool children.

(5 semester periods)

987 **Workshop for Foster Parents**

Role of the foster parent in relation to the foster child, placement agency and community.

(5 semester periods)

990 **Drugs and Drug Abuse**

Information about kinds of drugs, effects on body and emotions; why young people begin use of drugs; how community controls and prevents drug traffic; the relationship between motives for drug use and the family and society techniques; action to improve family living and to reduce drug use in the community.

995 **Growth and Development of the Young Child (Vocational Course)**

Designed as preparation for training for employment in child care occupations; physical, social, emotional, and intellectual development of the young child; understanding of the influence of cultural environment on development and individual differences; factors influencing child development.

(5 semester periods)

996.1 **Child Care and Guidance 1 – Program, Methods, and Materials (Vocational Course)**

Designed to increase the competence of personnel in the field of preschool education; philosophy of early childhood education; development of skills and techniques needed for employment in nursery schools and child care centers; program planning and scheduling; exploration of relationships between teacher and child, parents, and administrators.

(5 semester periods)

SUBJECT NO.

996.2 **Child Care and Guidance 2–Curriculum: Planning, and Teaching (Vocational Course)**

Curriculum for young children from the standpoint of defining objectives; selection of elements for program; methods of organization and presentation of materials; emphasis on how children learn and on selection of materials for learning.
Prerequisite: Child Care and Guidance 1, or permission of instructor.

(5 semester periods)

998 **Child, Home, School, and Community (Vocational Course)**

Continuation of the study of child growth and development, with emphasis upon patterns of living in a democratic society; factors affecting family life; impact of the family, school, and community on the child's development; community resources and creative ways to use them.
Prerequisite: Growth and Development of the Young Child, or its equivalent.

(5 semester periods)

999 **Parent Education for Employed Mothers (Vocational Course)**

Designed to assist employed mothers in discovering, evaluating, and selecting child care services for their children; development of greater understanding of children; consideration of appropriate relationships between the home and the child care center; and effective utilization of limited time spent with children.

1000-1599 INDUSTRIAL EDUCATION

SUBJECT NO. *1000-1099 APPRENTICESHIP EDUCATION*

1004.1 **Auto Mechanics 1 – Appr. (Imported and Domestic Cars)**

Auto mechanic and his trade; basic mathematics; tools of trade; lubrication; frames; suspensions and steering; brakes.

(5 semester periods)

1004.2 **Auto Mechanics 2 – Appr. (Imported and Domestic Cars)**

Automotive clutches; transmissions; universal joints and final drives; rear axles and differentials; anti friction bearings; welding.

(5 semester periods)

1004.3 **Auto Mechanics 3 – Appr. (Imported and Domestic Cars)**

Principles of the internal combustion engine; measuring tools; cylinder heads, oil pans, blocks, and crank cases; crankshafts and flywheels; connecting rods; pistons, wristpins, and rings; valves and their operating mechanisms; engine lubrication, engine cooling; diesel engines.

(5 semester periods)

1004.4 **Auto Mechanics 4 – Appr. (Imported and Domestic Cars)**

Automotive fuel systems, carburetion, electricity, and magnetism; storage batteries; generators and their control; starter motors and their control; lighting systems; ignition systems; accessories; tune-up procedure.

(5 semester periods)

1007.1 **Barbering 1 – Appr.**

History and appreciation of barbering; instruments and equipment; honing and stropping, shaving, haircutting, shampooing; tonic, and massage; hygiene, sanitation, and bacteriology; anatomy and physiology of cells; digestion; circulatory systems and bones of the head.

(5 semester periods)

1007.2 **Barbering 2 – Appr.**

Muscles of the head, neck, and face; nervous system; skin; electricity; light therapy; cosmetics, their properties and uses; hair, scalp, and skin ailments, diseases; theory of massage; facials; shampoo and scalp treatment; hair coloring; techniques of hairstyling; shop management and barbering ethics.

(5 semester periods)

1011.1 **Brickmasonry 1 – Appr.**

Orientation to the work and the trade; material; equipment; trowel practice.

(2½ semester periods)

1011.2 **Brickmasonry 2 – Appr.**

Mortar; measurements; mathematics; materials.

(2½ semester periods)

1011.3 **Brickmasonry 3 – Appr.**

Materials; mathematics; safety; wall types.

(2½ semester periods)

SUBJECT NO.

1011.4 **Brickmasonry 4 – Appr.**

Fire brick and refractory items; building components; tool usage.

(2½ semester periods)

1011.5 **Brickmasonry 5 – Appr.**

Specialty work; mathematics; blueprints and plans.

(2½ semester periods)

1011.6 **Brickmasonry 6 – Appr.**

Employer-employee relations; safety; refractory specialties; job sketches and estimates.

(2½ semester periods)

1012.1 **Acoustical Tile 1 – Appr.**

Introduction to acoustical tile industry; need for mathematics; review of whole numbers, fractions, decimals, percentage, and measurement.

(5 semester periods)

1012.2 **Acoustical Tile 2 – Appr.**

Job responsibilities, attitudes, and workmanship; mathematics, measurements, and trade applications; power-driven hand tools; leveling devices; safety and first aid.

(5 semester periods)

1012.3 **Acoustical Tile 3 – Appr.**

Trade mathematics, blueprint reading, plans and specifications; shop sketches; job layout; acoustical ceiling suspension systems; budgeting; exposed grid systems; semi-exposed grid systems and fire-rated grid systems.

(5 semester periods)

1012.4 **Acoustical Tile 4 – Appr.**

Trade mathematics, institutional methods, concealed systems, wood suspension system, air handling; gypsum-board, acoustical tile and ceiling board, perforated asbestos board; and metal-clad tile and board.

(5 semester periods)

1013.1 **Cabinetmaking and Millwork 1 – Appr.**

Cabinetmaker and his trade; mathematics; bench work; hand tools; machines; blueprint reading; basic detailing and stock billing; principles of construction and layout; safety.

(5 semester periods)

1013.2 **Cabinetmaking and Millwork 2 – Appr.**

Shop and theory; basic mathematics; introduction to detailing and stockbilling; power machines and their uses; rod and panel layout; bench and millwork; laminated plastics; safety.

(5 semester periods)

1013.3 **Cabinetmaking and Millwork 3 – Appr.**

Shop and theory; study of lumber and veneers; adhesives, plastic laminates; cabinets and fixtures; millwork; blueprint reading and layout; safety.

(5 semester periods)

SUBJECT NO.

1013.4 **Cabinetmaking and Millwork 4 – Appr.**

Applied mathematics: layout; drawing; fixtures; millwork; paneling; veneers; abrasives; lacquers, oils, and paints; machine maintenance and adjustments; materials; safety.

(5 semester periods)

1013.5 **Cabinetmaking and Millwork 5 – Appr.**

Fundamentals of drafting; detailing of simple store fixtures, cases, partitions; principles of stockbilling as it applies to millwork and cabinetmaking trades.

(5 semester periods)

1016.1 **Carpentry 1 – Appr.**

Basic mathematics; blueprint reading; construction problems; layout of walls, floors, foundations.

(5 semester periods)

1016.2 **Carpentry 2 – Appr.**

Legal rights and benefits; roof frame and exterior trim; blueprint reading; mathematics; materials; tool practice.

(5 semester periods)

1016.3 **Carpentry 3 – Appr.**

Employee relations; interior work finish; stair building; mathematics; blueprint reading; tool practice.

(5 semester periods)

1016.4 **Carpentry 4 – Appr.**

History of cement and concrete; form construction; rough hardware; towers; scaffolds, and rigging; ornamental concrete; heavy timber and log construction; blueprint reading; form detailing; mathematics.

(5 semester periods)

1017.1 **Motion Picture Property Craftsmanship 1 – Appr.**

Practical science; safety; hygiene; blueprint reading and layout.

(5 semester periods)

1017.2 **Motion Picture Property Craftsmanship 2 – Appr.**

Practical science; mechanical sketching; motion picture properties constructed of wood.

(5 semester periods)

1017.3 **Motion Picture Property Craftsmanship 3 – Appr.**

Plastics used in the motion picture industry; plastic form fastening methods.

(5 semester periods)

1017.4 **Motion Picture Property Craftsmanship 4 – Appr.**

Introduction to model making; model construction; sketching; use of materials; construction methods.

(5 semester periods)

1017.5 **Motion Picture Property Craftsmanship 5 – Appr.**

Motion picture miniature construction; materials and tools used; construction methods.

(5 semester periods)

1017.6 **Motion Picture Property Craftsmanship 6 – Appr.**

Tools and materials used in motion picture properties; construction of leather properties; ornamental metal.

(5 semester periods)

SUBJECT NO.

1017.7 **Motion Picture Property Craftsmanship 7 – Appr.**

Special effects constructed by property craftsmen; rigging; basic projects in special effects.

(5 semester periods)

1017.8 **Motion Picture Property Craftsmanship 8 – Appr.**

Basic electricity as applied to motion picture properties; glass cutting and installation.

(5 semester periods)

1018.1 **Motion Picture Set Designers 1 – Appr.**

History; buildings and materials; drafting standards; selected architectural details; architecture of early Mediterranean area.

(5 semester periods)

1018.2 **Motion Picture Set Designers 2 – Appr.**

History; building and materials; camera angle; selected architectural details; perspective drawing; basic theatrical stage design.

(5 semester periods)

1018.3 **Motion Picture Set Designers 3 – Appr.**

History; buildings and materials; camera angles; selected architectural details; perspective; theatrical stage design; miniatures.

(5 semester periods)

1019.1 **Concrete Masonry 1 – Appr.**

Hand and power tools; equipment; materials, proportions, mixing, testing and working characteristics of concrete; safety and health.

(5 semester periods)

1019.2 **Concrete Masonry 2 – Appr.**

Concrete slabs; colored concrete; laying out and finishing steps; grouting; patching defective concrete areas; sanitary cove and straight bases; expansion and contraction; curing and finishing problems; use of mathematical formulas; safety.

(5 semester periods)

1019.3 **Concrete Masonry 3 – Appr.**

Planning, laying out, pouring, and finishing of curbs, gutters, streetwalks, and driveways; magnesite floors and steps; blueprint reading and mathematics; specialized jobs; industrial relations; health and safety.

(5 semester periods)

1020.1 **Construction Equipment Mechanics 1 – Appr.**

Basic employment information; safety and first aid; correct use and maintenance of tools; orientation to heavy equipment; basic mathematics; signals; principles of rigging; orientation to component parts of a machine; lubrication, cooling system, air intake system, exhaust system.

(5 semester periods)

1020.2 **Construction Equipment Mechanics 2 – Appr.**

Internal combustion engines; description and construction; engine principles; components; preventive maintenance; safety; fuel systems and carburetion; fuel pump design (diesel and gasoline); preventative maintenance; safety.

(5 semester periods)

SUBJECT NO.

1020.3 Construction Equipment Mechanics 3 – Appr.

Accessory equipment; automotive electricity ignition systems; clutches and clutch timing; converters; parts, books, and manuals; U-joints and drive lines.

(5 semester periods)

1020.4 Construction Equipment Mechanics 4 – Appr.

Transmissions: standard, automatic; rear axles single reduction – two speed; tandem drive; axle shifting systems; final drives; adjustments; lubrication.

(5 semester periods)

1020.5 Construction Equipment Mechanics 5 - Appr.

Brakes; hydraulic, electrical, vacuum power; brake boosters; repairs; air brakes; compressor governors; starters for motors; valves; tires and wheels; frames; suspensions and undercarriage.

(5 semester periods)

1020.6 Construction Equipment Mechanics 6 – Appr.

Principles of hydraulics; liquid flow; valves; pumps; hydraulic systems; electric power; theory of electricity; circuits; magnetism and induction; generation of AC and DC; induction motors; maintenance and safety.

(5 semester periods)

1020.7 Construction Equipment Mechanics 7 – Appr.

Welding principles; oxyacetylene; electric arc; soldering. Water pumps: centrifugal; pistons; diaphragms; valves. Compressors: piston type; valve type; screw type; tanks, governors, gauges, preventive maintenance.

(5 semester periods)

1020.8 Construction Equipment Mechanics 8 – Appr.

Orientation to plant equipment; concrete batch plant; asphalt plant; mechanical principles of plant equipment; on-the-job application – plant equipment.

(5 semester periods)

1021.1 Construction Equipment Operation 1 – Appr.

Basic employment information; basic mathematics; safety and first aid; vehicle code and regulations; correct use and maintenance of tools; orientation – construction equipment; service and care of equipment; fuel system and carburetion; exhaust system; electrical system; hydraulic system; tune-up; clutches and frictions; converters; transmissions; universal joints and drive lines; differentials; tires and wheels.

(5 semester periods)

1021.2 Construction Equipment Operation 2 – Appr.

Gear reduction; final drives; steering systems; brakes; wire rope and rigging; signals; grade checking and print reading; principles of welding and cutting; electric power.

(5 semester periods)

1021.3 Construction Equipment Operation 3 – Appr.

Mechanical principles; construction equipment; crawler tractors; rubber-tired tractors; motor scrapers; twin motor scrapers; towed scrapers; motor patrols; crawler cranes; truck crane; parts, books, and manuals; soils and materials.

(5 semester periods)

SUBJECT NO.

1021.4 **Construction Equipment Operation 4 – Appr.**

On-the-job application – construction equipment; excavating equipment; truck and crawler crane; pile driving; trenchers; drills; crawler tractor; skip loader; hydraulic backhoe; motor scraper; tandem scraper; preventive maintenance; schedule checking; minor adjustments; developing check lists.

(5 semester periods)

1023.1 **Die Sinker – Trimmer 1 (Orientation) Appr.**

Trade orientation; basic blueprint reading; shop theory and practice; safety.

(5 semester periods)

1023.2 **Die Sinker – Trimmer 2 (Blueprint Reading) Appr.**

Blueprint reading of auxiliary views, intersections and developments, working drawings, and freehand sketching fundamentals.

(5 semester periods)

1023.3 **Die Sinker – Trimmer 3 (Mathematics) Appr.**

Basic Mathematics: addition, subtraction, multiplication, division, common fractions, decimal fractions, decimal equivalents, percentage, square root, ratio and proportion.

(5 semester periods)

1023.4 **Die Sinker – Trimmer 4 (Tools and Equipment) Appr.**

Hand tools and measuring instruments; lathes; shapers; milling machines; types of dies; forging equipment; shop theory and practice; safety.

(5 semester periods)

1023.5 **Die Sinker – Trimmer 5 (Intermediate Mathematics) Appr.**

Shop algebra and applications; shop geometry and applications; surfaces and volumes; problems and practices.

(5 semester periods)

1024.1 **Die Sinking – Impression 1 – Appr.**

Freehand sketches; construction problems; allowance and tolerances; job descriptions; and shortcuts for layout work.

(5 semester periods)

1024.2 **Die Sinking – Impression 2 – Appr.**

Orientation to design; construction problems; allowance and tolerances in design; forging processes and equipment.

(5 semester periods)

1024.3 **Die Sinking – Impression 3 – Appr.**

Basic function in trigonometry, shop applications; compound angles; surface and solids; calculations; solution of right and oblique angles.

(5 semester periods)

1024.4 **Die Sinking – Impression 4 – Appr.**

Physical properties of metals; steel classification; testing; heat treating; welding.

(5 semester periods)

SUBJECT NO.

1024.5 **Die Sinking – Impression 5 – Appr.**

Machines and equipment; milling machines; hydrotels; electric discharge machining; numerical control machining; handbook usage; shop safety.

(5 semester periods)

1025.1 **Electrical Fixture Fabricating – Lighting Fixtures 1 – Appr.**

Scope and safe practices of the trade; job orientation; Underwriters Laboratories specifications; identification and uses of metal and plastics, hand tools, and power machines.

(5 semester periods)

1025.2 **Electrical Fixture Fabricating – Lighting Fixtures 2 – Appr.**

Review of mathematics; linear, angular, circular, area, and volume measurements; drawings; basic and advanced blueprint reading.

(5 semester periods)

1025.3 **Electrical Fixture Fabricating – Lighting Fixtures 3 – Appr.**

Principles and application of rectangular, circular, and multi-piece pattern development and shop layout.

(5 semester periods)

1025.4 **Electrical Fixture Fabricating – Lighting Fixtures 4 – Appr.**

Rules of parallel line development; radial line development for conical shapes, and rectangular pyramids and tapers.

(5 semester periods)

1037.1 **Floor Covering – Resilient and Carpeting 1 – Appr.**

History and appreciation of the floor-covering trade; tools and equipment; safety and health; materials.

(5 semester periods)

1037.2 **Floor Covering – Resilient and Carpeting 2 – Appr.**

Mathematics; blueprint reading; cove base installation; application of resilient floor tile; basic employment information.

(5 semester periods)

1037.3 **Floor Covering – Resilient and Carpeting 3 – Appr.**

Problems of the trade; linoleum laying; sink covering; wall covering; carpet laying.

(5 semester periods)

1046.1 **Ironworking – Architectural and Ornamental 1 – Appr.**

Orientation; trade appreciation; tools and equipment; principles of ironworking; materials; drawing and layout; mathematics; related science; basic employment information; erection of ornamental ironwork; safety.

(5 semester periods)

1046.2 **Ironworking – Architectural and Ornamental 2 – Appr.**

Advanced drawing; rigging and moving; first aid; erection of reinforced iron; blueprint reading; layout and detailing; safety.

(5 semester periods)

SUBJECT NO.

1046.3 **Ironworking – Architectural and Ornamental 3 – Appr.**

Erection of structural steel, sheeting, and fencing; welding and burning; safety.

(5 semester periods)

1049.1 **Ironworking – Reinforcing 1 – Appr.**

Orientation; tools, equipment, and materials; basic drafting and mathematics; basic health, safety, and employment information.

(5 semester periods)

1049.2 **Ironworking – Reinforcing 2 – Appr.**

Advanced drawing and blueprint reading; principles and practices of rigging and of erecting reinforcing iron; advanced mathematics and related science; welding; principles and practices of structural and ornamental ironworking.

(5 semester periods)

1052.1 **Ironworking – Structural and Ornamental Erectors 1 – Appr.**

Orientation; basic employment information; basic mathematics and related science; materials, tools and equipment; elementary blueprint reading; basic processes.

(5 semester periods)

1052.2 **Ironworking – Structural and Ornamental Erectors 2 – Appr.**

Basic employment information; mathematics; materials, tools, and equipment; advanced blueprint reading; rigging and reeving processes.

(5 semester periods)

1052.3 **Ironworking – Structural and Ornamental Erectors 3 – Appr.**

Erection of reinforced iron, including forms, typing, handling, and layout; blueprint reading; welding and burning; erection of ornamental ironwork, sheeting, fences, and service station; safety.

(5 semester periods)

1055.1 **Ironworking – Structural and Ornamental Fabricators 1 – Appr.**

Trade orientation; equipment; materials; basic arithmetic; elementary drawing; safety.

(5 semester periods)

1055.2 **Ironworking – Structural and Ornamental Fabricators 2 – Appr.**

Basic arithmetic; elementary drawing; processes; materials; equipment; human relations; safety.

(5 semester periods)

1055.3 **Ironworking – Structural and Ornamental Fabricators 3 – Appr.**

Logarithms; Smoley's tables; layout and template making; processes; human relations; safety.

(5 semester periods)

1055.4 **Ironworking – Structural and Ornamental Fabricators 4 – Appr.**

Structural trigonometry; layout and template making; human relations; industrial economics; safety.

(5 semester periods)

SUBJECT NO.

1060.1 **Foundry Molding and Core Making 1 – Appr.**

Introduction to apprenticeship patterns and core boxes; sand molding and selection of various sand conditioning.

(5 semester periods)

1060.2 **Foundry Molding and Core Making 2 – Appr.**

Principles and theory of cored sand shelves, cored oven, cured cores and molds, foundry quality control; hand tools; risering; elementary metallurgy; metal melting practices, pouring practices; cleaning equipment and inspection techniques.

(5 semester periods)

1060.3 **Foundry Molding and Core Making 3 – Appr.**

Principles and theory of cover machine molding pattern, draw machines, and sand slingers; hyproduce machine; various casting methods; various alloys; blueprint reading and related mathematics.

(5 semester periods)

1060.4 **Foundry Molding and Core Making 4 – Appr.**

Application of induction melting of materials, high-pressure molding procedures, synthetic sand production; jobbing foundry procedures; automated practices and centrifugal casting.

(5 semester periods)

1062.1 **Locksmithing 1 – Appr.**

History of locksmithing; working relationships and responsibilities; apprenticeship; lock and building hardware; key blank identifications; tools and equipment.

(5 semester periods)

1062.2 **Locksmithing 2 – Appr.**

Apprentice working relationships; personal responsibilities; building hardware; automotive keying; key duplication; evaluation.

(5 semester periods)

1062.3 **Locksmithing 3 – Appr.**

Job responsibilities; key making; safety kits and their uses; merchandising; ordering materials.

(5 semester periods)

1062.4 **Locksmithing 4 – Appr.**

Personal codes and conduct; locks and keys; safety; selling products and service; specialty locks; hardware.

(5 semester periods)

1064.1 **Meat Cutting 1 – Appr.**

Meat cutter and his trade; basic mathematics; scales and cash registers; identification, selection of meats and meat products; design, upkeep of shop equipment; shop sanitation; safety.

(5 semester periods)

1064.2 **Meat Cutting 2 – Appr.**

Laws governing production and sale of meat and meat products; breaking and cutting beef, veal, lamb, mutton, pork, poultry, rabbits, fish; display of meats; cooking methodology; advanced salesmanship; market management; cured and smoked meats; industrial relations; safety.

(5 semester periods)

SUBJECT NO.

1068.1 **Office Machine Repair 1 – Appr.**

Knowledge and skills necessary for the proper disassembly, reassembly, repair, and adjustment of manual typewriters.

(5 semester periods)

1068.2 **Office Machine Repair 2 – Appr.**

Knowledge and skills necessary for the proper disassembly, reassembly, repair, and adjustment of electric typewriters.

(10 semester periods)

1068.3 **Office Machine Repair 3 – Appr.**

Dismantling, assembling, and adjusting by sections; using parts catalog; finding and correcting minor troubles in the customer's office.

(10 semester periods)

1068.4 **Office Machine Repair 4 – Appr.**

Knowledge and skills necessary for the proper disassembly, reassembly, repair, and adjustment of the IBM Executive and Selectric models.

(10 semester periods)

1070.1 **Drywall 1 – Appr.**

Introduction to apprenticeship and the drywall industry; safety and first aid; tools and materials; arithmetic; drywall application.

(5 semester periods)

1070.2 **Drywall 2 – Appr.**

Drywall systems and framing.

(5 semester periods)

1070.3 **Drywall 3 – Appr.**

Basic science; basic blueprint reading; advanced drywall systems; interior finish.

(5 semester periods)

1070.4 **Drywall 4 – Appr.**

Building trades; blueprint reading; basic welding procedures.

(5 semester periods)

1073.1 **Roofing – Built-up and Composition 1 – Appr.**

Trade history and orientation to the apprenticeship program; applied mathematics; materials and their application; handling materials; basic specifications and codes; hand tools; safety.

(5 semester periods)

1073.2 **Roofing – Built-up and Composition 2 – Appr.**

Blueprint reading; roofing problems; foundation and slab waterproofing; operation of power equipment; specifications, codes and safety.

(5 semester periods)

SUBJECT NO.

1073.3 **Roofing – Built-up and Composition 3 – Appr.**

The apprentice system; mathematics for the roofer; tools, equipment, and machinery; roofing materials and their application; blueprint reading and specifications.

(5 semester periods)

1075.1 **Scale Mechanics 1 – Appr.**

Hand tool identification and use; measurement and calculations of linear dimensions, areas, and volumes; power tool identification and use; shop safety.

(5 semester periods)

1075.2 **Scale Mechanics 2 – Appr.**

Hand and layout tool use; air- and electric-powered tools; drill press and grinder use; basic welding and metal cutting; blueprint reading; ship sketching; and work order preparation; scale types; lever systems and dials.

(5 semester periods)

1075.3 **Scale Mechanics 3 – Appr.**

Scale design and use; calibration; national and state standards; weights and measures; inspection and regulations; seals.

(5 semester periods)

1076.1 **Sheet Metal 1 – Appr**

Care and use of hand and power tools, instruments, and equipment; materials and sheet metal processing; blueprint reading; mathematics, including basic geometry; layout principles and practices; plastics; health and safety.

(5 semester periods)

1076.2 **Sheet Metal 2 – Appr**

Applying principles of pattern layout; developing and reading plans, work drawings; designing and detailing; developing patterns for articles, fittings, and projects; air conditioning, heating and ventilating systems; interpreting and using mathematical formulas; safety; federal, state, and local laws affecting the sheet metal worker.

(5 semester periods)

1076.3 **Sheet Metal 3 – Appr.**

Advanced study of plan reading; developments of work drawings, designing, detailing and layout of patterns for kitchens, fountains, and bar equipment; projects and fittings for exhaust, blowpipe, and refuse-collecting systems; plastics; applications of mathematical formulas in fixturing area; volume fire prevention; safety; building codes and ordinances.

(5 semester periods)

1076.4 **Sheet Metal 4 – Appr.**

Specific and more complex phases of planning, detailing, designing, and developing of work drawings and layout of patterns; specialized work, such as electric signs, marquees, and heating systems; plastics; advanced mathematics; estimations; health and safety.

(5 semester periods)

1079.1 **Surveying 1 – Appr.**

Definition of surveying terms; maintenance of tools and equipment; measurement of horizontal distances; use of leveling rod; field communications; engineering lettering and basic drafting; safety.

(5 semester periods)

SUBJECT NO.

1079.2 **Surveying 2 – Appr.**

Trigonometric functions of an acute angle; logarithms; introduction to slide rule; tables of trigonometric functions; interpolation of tables; solution of right triangles; solution of oblique triangles; trigonometry applied to survey problems.

(5 semester periods)

1079.3 **Surveying 3 – Appr.**

Survey accuracy requirements; basic theory of errors; corrections of taped measurements; leveling; survey sights and signals.

(5 semester periods)

1079.4 **Surveying 4 – Appr.**

Angular measurements; circular curves; vertical and spiral curves; referencing survey points; public relations.

(5 semester periods)

1079.5 **Surveying 5 – Appr.**

Traverse surveys; traverse adjustments and area problems; electronics surveys; hydrographic surveys; research for survey data.

(5 semester periods)

1079.6 **Surveying 6 – Appr.**

Theory of stadia; topographic surveys; photogrametric surveys; architectural surveys.

(5 semester periods)

1079.7 **Surveying 7 – Appr.**

Practical astronomy; construction surveys; property surveys; laws affecting the surveyor.

(5 semester periods)

1079.8 **Surveying 8 – Appr.**

United States public land surveys; triangulation and trilateration; techniques of instruction; public relations seminar.

(5 semester periods)

1080.1 **Tool, Die, Mold, and Precision Machinist 1 – Appr.**

Fundamental arithmetic, use of decimals, fractions, square root and percentage; elementary algebra; blueprint reading; shop theory; introduction to Machinist's Handbook.

(5 semester periods)

1080.2 **Tool, Die, Mold, and Precision Machinist 2 – Appr.**

Plane geometry, study of polygons, circle, angles, and triangle; shop trigonometry; use of tables, formulas of the right triangle; blueprint reading; shop theory and continued use of Machinist's Handbook.

(5 semester periods)

1080.3 **Tool, Die, Mold, and Precision Machinist 3 – Appr.**

Machine processes; materials; theory of machine operation, including setups; milling broaches, shapers, and planers; Machinist's Handbook problems.

(5 semester periods)

SUBJECT NO.

1080.4 Tool, Die, Mold, and Precision Machinist 4 – Appr.

Principles of jig bores and setups; grinding operations; nonconventional machining; modern mathematics; metrology; attributes of a journeyman, and Machinist's Handbook problems.

(5 semester periods)

1080.5 Tool, Die, Mold, and Precision Machinist 5 – Appr.

Metal stamping; punch presses; basic blanking and piercing; die sets and tool steels.

(5 semester periods)

1080.6 Tool, Die, Mold, and Precision Machinist 6 – Appr.

Introduction to plastics, compression molds, transfer molds, injections molds, mold components and rubber molds.

(5 semester periods)

1090.1 Plumbing 1 – Appr.

Tools and equipment; plumbing fixtures; cast-iron pipe and fittings; safety practices.

(5 semester periods)

1090.2 Plumbing 2 – Appr.

Installation of finish plumbing; valves; installation of steel pipe; hangers and supports.

(5 semester periods)

1090.3 Plumbing 3 – Appr.

Basic drawing; orthographic representation; isometric representation.

(5 semester periods)

1090.4 Plumbing 4 – Appr.

Applied trade mathematics; glass piping; non-metallic piping; plan reading.

(5 semester periods)

1090.5 Plumbing 5 – Appr.

Principles of operation and installation of waste and vent systems.

(5 semester periods)

1090.6 Plumbing 6 – Appr.

Principles of sizing of domestic water systems; distribution of hot water; potable water systems; gas supply systems.

(5 semester periods)

1090.7 Plumbing 7 – Appr.

Principles and operation of oxyacetylene-welding equipment; techniques for making oxyacetylene welds.

(5 semester periods)

1090.8 Plumbing 8 – Appr.

Plumbing code; additions to plumbing code.

(5 semester periods)

SUBJECT NO.	
1090.9	**Plumbing 9 – Appr.** Gas controls; plumbing repair, fire protection. **(5 semester periods)**
1090.10	**Plumbing 10 – Appr.** Plumbing layout; sizing of gas and water systems; water distribution systems; material take-off. **(5 semester periods)**
1091.1	**Printing 1 – Appr.** Orientation to printing equipment, materials, and processing; introduction to halftones. **(5 semester periods)**
1091.2	**Printing 2 – Appr.** Shop and theory; phases of graphic arts; camera techniques in gravure, letterpress, and offset in black and white. **(5 semester periods)**
1091.3	**Printing 3 – Appr.** Theory of color printing; factors in color reproduction; separation materials for reflection copy. **(5 semester periods)**
1091.4	**Printing 4 – Appr.** Development and exposure of color separation materials; color correction methods; built-in masking systems; methods of color separation; care of densitometry equipment. **(5 semester periods)**
1091.5	**Printing 5 – Appr.** Shop and theory; making negatives and positives; learning to contact, develop, and evaluate. **(5 semester periods)**
1091.6	**Printing 6 – Appr.** Shop and theory; making corrections on single- and multiple-page negatives and positives to obtain maximum fidelity in four-color process reproductions. **(5 semester periods)**
1091.7	**Printing 7 – Appr.** Industry classification; basic and trade-related mathematics; measurement devices; drafting tools. **(5 semester periods)**
1091.8	**Printing 8 – Appr.** Shop and theory; pin register system; photographic information; materials and techniques; stripping operations; offset stripping requirements. **(5 semester periods)**
1091.9	**Printing 9 – Appr.** Orientation to platemaking; burning; developing; lacquering; preserving; masking; exposure controls; materials; evaluation. **(5 semester periods)**

SUBJECT NO.

1091.10 **Printing 10 – Appr.**

Machines used; chase and exposure controls; backboard and machine maintenance; safety; basic mathematics; evaluation.

(5 semester periods)

1091.11 **Printing 11 – Appr.**

Offset duplicator machines; preparation for operation; service and maintenance; operational aids and techniques; evaluation.

(5 semester periods)

1091.12 **Printing 12 – Appr.**

Offset presswork; principles of makeready; care and maintenance of equipment, materials and job applications; safety; evaluation.

(5 semester periods)

1100-1499 TRADE AND TECHNICAL EDUCATION

SUBJECT NO.

1100-1114 AEROSPACE

1100.1 **Introduction to Aeronautics**

History of aviation; theory of flight; basic structures of aircraft; meteorology; navigation; regulations; preparation for F.A.A. private license examination.

(5 semester periods)

1100.2 **Aeronautics – Commercial-Instrument Ground School**

Preparation for F.A.A. commercial and instrument examinations; computer problems; flight and engine instruments; navigation review; meteorology; and radio navigation.
Prerequisite: Completion of basic ground school or equivalent.

(5 semester periods)

1101 **Fundamentals of Inertial Guidance Systems**

Basic concepts, purpose and method of inertial guidance systems; accelerometers; gyroscopes; and systems components.

(2½ semester periods)

1115-1150 AUTOMOTIVE

1116 **School Bus Driver Training and Safety Education**

Driving skills; laws and rules; mechanical aspects; pupil discipline; public relations; radio operation; and first aid.

(2½ semester periods)

1117 **Truck Driving and Safety**

Fundamentals of truck operation; driving habits, skills, and attitudes; behind-the-wheel instruction; safety.

1126.1 **Auto Mechanics 1**

Shop and theory; internal combustion engines; fundamentals of maintenance and repair; use and care of hand tools and power equipment.

(5 semester periods)

1126.2 **Auto Mechanics 2**

Shop and theory; overhauling engines, clutches, rear-end and drive assemblies; lubrication.
Prerequisite: Auto Mechanics 1, or equivalent.

(5 semester periods)

1126.3 **Auto Mechanics 3**

Shop and theory; overhauling generators, distributors, carburetors, fuel pumps, cooling systems, and engines.
Prerequisites: Auto Mechanics 1, 2, or equivalent.

(5 semester periods)

1127 **Automotive Parts Counterman – Wholesaler**

Counterman procedures and techniques, identification of auto parts, parts catalog reading and pricing, salesmanship.

(5 semester periods)

SUBJECT NO.

1128 **Tow Truck Operators**

Towing rules and regulations; trouble diagnosis, including transmission, differential, or rear axle, brakes; customer relations, safety.

(5 semester periods)

1129 **Auto Brakes**

Shop and theory; theory of brakes; types of brakes and operating systems; service and repair of all standard types of brakes.
Prerequisites: Auto Mechanics 1, 2, or equivalent.

(5 semester periods)

1132.1 **Auto Electrics 1**

Principles of electricity; electrical instruments; ignition systems; equipment used for testing distributors, coils, and ignition systems; electrical circuits; storage batteries.
Prerequisites: Auto Mechanics 1–3, or equivalent.

(5 semester periods)

1132.2 **Auto Electrics 2**

Shop and theory; starter systems; generators and alternators; generator and alternator controls; lighting system; electric accessories.
Prerequisites: Auto Mechanics 1–3, or equivalent.

(5 semester periods)

1133 **Heavy Duty Brakes**

Advanced study of hydraulic brakes system, electrical brakes system, vacuum power brakes system; air brakes, governors, air starting motors, trailer air brakes; tires, wheels, and steering; vehicle code and regulations.

(5 semester periods)

1134 **Heavy Duty Electrical and Carburetion Systems**

Truck electrical system, including distributors, storage batteries, starter motors and their controls, alternators, regulators, generators, rectifiers; carburetion and fuel systems, including chokes, air filters, manifolds, and superchargers.

(5 semester periods)

1135 **Automatic Transmissions**

Shop and theory; disassembling, assembling; adjusting automatic transmissions; overdrive and automatic transmissions.
Prerequisites: Auto Mechanics 1–3, or equivalent.

(5 semester periods)

1136 **Heavy Duty Transmission Automotive**

Shop theory; disassembling, assembling, and adjusting of heavy-duty transmissions.

(5 semester periods)

1137 **Heavy Equipment Operator**

Basic mechanical functions of heavy equipment; operating heavy equipment; basic maintenance of heavy equipment.

(5 semester periods)

SUBJECT NO.

1138.1 **Auto Tune-Up 1**

Tune-up procedure; basic engine operation; compression testing; basic engine operation; spark plugs; battery-starter test; ignition system; generator and alternator; regulator; ignition timing.
Prerequisites: Auto Mechanics 1–3, or equivalent.

(5 semester periods)

1138.2 **Auto Tune-Up 2**

Electrical testing; trouble-shooting; tune-up of automotive ignition, and of fuel and carburetion systems.
Prerequisites: Auto Mechanics 1–3, or equivalent.

(5 semester periods)

1139 **Automotive Upholstery**

Shop and theory; introduction to automotive upholstery sewing techniques; fundamentals of material measuring and fitting; removing and replacing seats and panels; use and care of heat and steam gun, hand and electric staples gun.

(5 semester periods)

1140 **Motor Sweeper Operation**

Basic mechanical functions of motor sweepers; operation and basic maintenance.

(5 semester periods)

1141 **Power Steering and Power Brakes**

Shop and theory; maintenance and repair; use of testing and special equipment demonstrations of various systems.
Prerequisites: Auto Mechanics 1–3, or equivalent.

(5 semester periods)

1142 **Automobile Air Conditioning**

Development of an understanding of automobile air-conditioning units and instruction in their installation and servicing; intended for automobile mechanics.

(5 semester periods)

1144.1 **Auto Body and Fender Repair 1**

Shop and theory; rudiments of removing and replacing bent and buckled metal; use of equipment and tools; soldering, welding, grinding, and sanding.

(5 semester periods)

1144.2 **Auto Body and Fender Repair 2**

Shop and theory; replacing and aligning damaged side panels, turret tops, fenders, hoods; lead filling; welding, cutting metals, and spot painting.
Prerequisites: Auto Body and Fender Repair 1, or equivalent.

(5 semester periods)

1145 **Automotive Detailing**

Shop and theory; washing, polishing, waxing, steam cleaning, painting touch up; interior cleaning; spotting and detailing.

(5 semester periods)

SUBJECT NO.

1145.1 **Service Station Selling and Service**

Service station selling and service – specific problems related to selling at service stations; product knowledge; customer relations; pump-island procedures; service procedures; record keeping; housekeeping; cost control; and opportunities in service station management.

(5 semester periods)

1146 **Diesel Engines**

Fuel systems; gear trains; cylinder heads; piston and sleeves; crankshaft; cylinder blocks; camshaft; cooling systems; valve train; accessories; lubrication.

(5 semester periods)

1148 **Outboard Motor Repair**

Internal engine components; external engine components; gearings and drive line; mounting; controls; greasing and lubrication; special and essential measuring; reading and understanding service manuals.

(5 semester periods)

1149.1 **Motorcycle Mechanic**

Shop and theory; orientation to motorcycle industry; internal combustion engine, assembly and disassembly; electrical system; lubrication system, power transmissions; frame and suspension; wheel and brake; tests and instruments and tune-up.

(25 semester periods)*

1149.2 **Motorcycle Driving**

Care and operation of the motorcycle; approved safe riding practice; laws of motion as they apply to the motorcycle; California Motor Vehicle Code applied to the motorcycle operator.

1150 **Marine Engine Fuel and Electric Systems – Care and Maintenance**

Shop and theory; principles of engine fuel and electrical systems; checking engine performance, making tests and adjustments.

(5 semester periods)

1151-1174 BUILDING CONSTRUCTION

1151.1 **Building Codes 1**

History of the building changes; permits, occupancies, fire districts, types of construction; exits, fire resistant construction; dwellings; apartment houses, commercial buildings; zoning requirements and other related subject matter of interest to architects, engineers, draftsmen, and contractors.

(5 semester periods)

1151.2 **Building Codes 2**

Arrangement and use of zoning codes; zone uses; building requirements, exceptions, and variances; nonconforming buildings and uses; steps in using code.

(5 semester periods)

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*Credits can be earned up to maximum number indicated.

SUBJECT NO.

1151.3 **Building Codes 3 – Plumbing**

Codes and ordinances required for the installation of plumbing materials and equipment, including definitions; regulations concerning quality and weights of materials; drainage systems, vents and venting, indirect waste piping, wet-vented systems, special wastes, traps and interceptors; joints and connections; plumbing fixtures; water distribution; house sewers and private sewer disposal systems; fuel gas piping; water heaters and vents; backflow protection and cross-connections; fire sprinklers and standpipes.

(5 semester periods)

1151.4 **Building Codes – Zoning**

A review and study of the zoning ordinances, city of Los Angeles; allowable zone uses; lot cuts; required yards; building heights; parking; loading zones; accessory buildings; special exceptions and variances.

(5 semester periods)

1152 **Locksmithing**

Principles of security; nomenclature and theory of locking devices and door hardware; keys; lock cylinders; automotive and furniture locks; and introduction to master keying.

(5 semester periods)

1153 **Pre-Apprenticeship Plumbing**

The plumbing and pipe-fitting industry; health and safety on the job; basic trade mathematics; tools and equipment, and materials identification; and types of pipe joints.

(5 semester periods)

1154.1 **Plumbing Code 1**

Plumbing codes and ordinances that affect rough in and finish work in city and county areas.

(5 semester periods)

1154.2 **Plumbing Code 2**

Requirements for installation of wastes, vents, cleanouts, traps, gas fittings, and water pipes; installation of domestic fixtures, hospital equipment, and industrial equipment.

(5 semester periods)

1161 **Building Inspection – Welding**

Duties and responsibilities of the building inspector in welding; building code and general practices, plan reading, weld symbols, high-tensile bolts.

(5 semester periods)

1162 **Building Inspection – Electrical**

Duties and responsibilities of building inspector: code coverage of electrical installation.

(5 semester periods)

1163 **Building Construction Estimating – Residential**

Orientation to construction blueprints and estimation of terminology; estimation of basic lumber and rough hardware; estimation of subtrades costs.

(5 semester periods)

SUBJECT NO.

1163.1 **Building Construction Estimating (Class A and B Construction)**

Estimating materials for Class A and B structures through the use of check lists; information tables and rules; quantity survey; material listing, such as lumber, rough hardware, concrete; subtrade co-ordination; concrete-form detailing; codes and safety requirements.

(5 semester periods)

1163.2 **Contractor License Preparation**

Orientation to California License Law and Construction Law Manual; federal and state laws pertaining to labor, management, insurance, taxes, housing, safety, payroll; assembling, making bids and contracts; familiarity with necessary forms.

(5 semester periods)

1163.3 **Construction Layout**

Types of instruments; use of builder's transit; measuring accessories, tapes, leveling rod, plumb bob, stakes, stadia; measurements; fieldwork; blueprint reading; building layout; special layouts; basic mathematics.

(5 semester periods)

1167 **Paint Technology**

Painting process, color and decorating, chemical coating, application methods; merchandising, service; sales, complaints, and failures.

(5 semester periods)

1168 **Paper Hanging**

Shop and theory; history of the paper-hanging trade; selection of wall coverings; estimations; preparation of walls and surfaces; skills of paper hanging; customer relations; safety.

(5 semester periods)

1169.1 **Brickmasonry – Pointing and Caulking**

Shop and theory; pointing and caulking; materials; equipment; safety.

(2½ semester periods)

1169.2 **Brickmasonry – Fireplace and Construction**

Principles of fireplace construction; materials, layout forming and placing concrete, chimney construction, and firebox layout.

(2½ semester periods)

1169.3 **Brickmasonry – Plan Reading**

Brick, block and stone plan-reading orientation, structural sheets, architectural sheets, roof plans, specifications, specialty sheets, steel placement, and material take-off.

(2½ semester periods)

1170.1 **Drywall Installation I**

Theory class; materials and tools; basics of drywall application; drywall systems; exterior covering and finishing; safety.

(5 semester periods)

SUBJECT NO.

1170.2 **Drywall Installation 2**

Theory class; framing; advanced drywall systems; interior finish; basic welding.

(5 semester periods)

1172 **Home Planning and Remodeling**

Planning and execution of building projects, including foundations, roofs, installation of partitions, elementary lighting, plumbing, and general repair.

(5 semester periods)

1174 **Property Maintenance and Repair**

Basic instruction to home and apartment owners regarding minor repair and maintenance in carpentry, cabinetmaking, plumbing, electricity, painting, waterproofing, sitework etc., and general household chores.

(5 semester periods)

1175-1249 DRAFTING AND DESIGN

1176.1 **Blueprint Reading 1**

Fundamentals of blueprint reading, alphabet of lines, orthographic projections, symbols, specifications.

(5 semester periods)

1176.2 **Blueprint Reading 2**

Interpretation of three-view drawings, sections, isometric and oblique drawings; development of plans, elevations, and details; sketching; reading of blueprints, both for mechanical and architectural fields.
Prerequisite: Blueprint reading 1, or equivalent.

(5 semester periods)

1180.1 **Blueprint Reading – Shipbuilding 1**

Reading of types of prints used in the shipbuilding industry; ship nomenclature; plan nomenclature; symbols; abbreviations; types and relationships of drawings; specifications; engineering orders and changes; practical problems; related mathematics.

(5 semester periods)

1180.2 **Blueprint Reading – Shipbuilding 2**

Orientation to the course, tour of projects at the yard; ship terminology; general arrangement of ships; nomenclature; essentials of blueprint reading; review of basic mathematics; types of materials; welding symbols.

(5 semester periods)

1180.3 **Blueprint Reading – Shipbuilding 3**

Purpose of blueprints, line, shape and size description; types of drawings; field trips through ships and lofts.

(5 semester periods)

SUBJECT NO.

1185.1 **Basic Drafting 1**

Basic drafting techniques; tool skills and processes common to all types of drafting work; related information for making plans or sketches; interpretation of nontechnical plans and blueprints; introduction to sketching.

(5 semester periods)

1185.2 **Basic Drafting 2**

Continuation of basic drafting techniques, stressing additional fundamentals that are prerequisite to advanced drafting courses.

(5 semester periods)

1187 **Machine Drafting – Detail Assembly**

Detail design fundamentals; manufacturing processes; drafting room procedures.

(5 semester periods)

1188.1 **Mechanical Drafting 1**

Orthographic and isometric drawings of machine parts, shop details and sections; orthographic and pictorial drawings of machine parts, shop details, auxiliary projections, screws and threads; geometrical problems and development; mechanical motions; rivets, keys and fastenings; shop detailing.
Prerequisite: Basic Drafting, or equivalent.

(5 semester periods)

1188.2 **Mechanical Drafting 2**

Shades and shadows; machine design; tool design; mechanical forms; gears; cams; assembly drawings from details; details from assemblies; tolerances; patent drawings; exploded drawings; work geared to field of study needed by the student.
Prerequisite: Mechanical Drafting 1, or equivalent.

(5 semester periods)

1190 **Electromechanical Drafting**

An advanced drafting course planned particularly for those who have learned basic drafting techniques; of a series of graded projects of working drawings as applied to electronic and electromechanical phases of engineering; stress placed on professional techniques which are required by industry, and on special symbols, circuitry, printed circuitry, miniaturization, servomechanism, and instrumentation.
Prerequisite: Mechanical Drafting, or equivalent.

(5 semester periods)

1191.1 **Technical Illustration 1**

Isometric and orthographic projections; oblique and perspective drawings; freehand sketching and technical drawing of parts and assemblies; translation of mechanical drawings and blueprints to pictorial illustrations; proper tools and materials; processes for reproducing illustrations.
Prerequisite: Mechanical Drafting, or equivalent.

(5 semester periods)

SUBJECT NO.

1191.2 **Technical Illustration 2**

Continuation of basic techniques, stressing additional fundamentals prerequisite to advanced technical illustration courses.
Prerequisite: Mechanical Drafting, or equivalent.

(5 semester periods)

1192 **Airbrush Painting**

Basic airbrush application with reference to function, use, proper care; techniques in photo retouching; opaque and transparent renderings; use of various materials and mediums to reproduce glass, wood, clouds, and other textures.
Prerequisite: Technical Illustration, or equivalent.

(5 semester periods)

1194.1 **Architectural Drafting 1**

Floor plans; elevations; details of small and large residences; study of building ordinances and materials; historic styles; sketching, shading, perspective, and simple rendering.
Prerequisite: Basic Drafting, or equivalent.

(5 semester periods)

1194.2 **Architectural Drafting 2**

Shop and theory; basic information and skills for drawing simple house plans and architectural details; construction required by Los Angeles city building codes.
Prerequisite: Architectural Drafting 1, or equivalent.

(5 semester periods)

1194.3 **Architectural Drafting 3**

Classification of buildings; graphic status; architectural design, presentation drawings, working drawing for various phases of construction, written specifications based on building codes.
Prerequisites: Architectural Drafting 1, 2, or equivalent.

(5 semester periods)

1194.4 **Architectural Drafting 4**

Shop and theory; basic information and skills for drawing simple house plans and architectural details; construction as required by Los Angeles city building codes; emphasis on construction detailing, windows and doors, fireplaces and chimneys, stair layouts, cabinets, foundations of two-story dwellings, symbols, new building materials, and heating.
Prerequisites: Architectural Drafting 1–3, or equivalent.

(5 semester periods)

1194.5 **Architectural Drafting 5**

Shop and theory; house styles, construction, site; plumbing, electrical requirements; sectional drawings; presentation drawings.
Prerequisites: Architectural Drafting 1–4, or equivalent.

(5 semester periods)

1195 **Civil Engineering Drafting**

Techniques of basic surveying, mapping; contract drawings; cost estimating.

(5 semester periods)

SUBJECT NO.

1196 **Petrochemical Pipe Drafting**

Piping materials; refining equipment; instruments; piping and instrument diagrams; isometrics.

(5 semester periods)

1197 **Sheet Metal Layout and Development – Aircraft**

Principles of aircraft sheet metal flat pattern layout; theory of bend development; use of projection methods to determine required information; review of basic mathematics through shop trigonometry.

(5 semester periods)

1200.1 **Sheet Metal Air Conditioning and Pattern Development 1**

Review of principles of layout, orthographic projection, radial line development and triangulation.

(5 semester periods)

1200.2 **Sheet Metal Air Conditioning and Pattern Development 2**

Introduction to plenums and mixing chambers; the development of patterns for box plenums; construction and layout; construction and development of mixing chambers.

(5 semester periods)

1200.3 **Sheet Metal Air Conditioning and Pattern Development 3**

Introduction to the development of patterns for round ducts and fittings; offset patterns; mathematical layout formulas for large offset development of fittings; boots of unlike diameters; the development of nonsymetrical tapers, and the use of scale drawings to develop the patterns for tapered lines of extreme length.
Prerequisites: Sheet Metal Air Conditioning Pattern Development 1, 2, or equivalent.

(5 semester periods)

1200.4 **Sheet Metal Air Conditioning and Pattern Development 4**

Introduction to industrial exhaust system hoods and canopies; spray booths; restaurant hoods toxic fume exhaust; roof caps and cowels; fire ordinances.
Prerequisites: Sheet Metal Air Conditioning and Pattern Development 1–3, or equivalent.

(5 semester periods)

1203.1 **Sheet Metal Detailing 1**

Interpreting plans and specifications in designing and ordering sheet metal products; reading of structural, architectural, electrical, plumbing, and air conditioning drawings.

(5 semester periods)

1203.2 **Sheet Metal Detailing 2**

Understanding certified drawings; use of slide rule; basic duet design; theory of air flow, fans and fan laws, air distribution; job organization and planning; making field drawings, order and specification sheets.
Prerequisite: Sheet Metal Detailing 1, or equivalent.

(5 semester periods)

1206.1 **Sheet Metal Detailing, Journeyman 1**

Reading and interpretation of structural, architectural, electrical, plumbing, air conditioning drawings; certified drawings; trade terms; use of slide rule.

(5 semester periods)

SUBJECT NO.

1206.2 **Sheet Metal Detailing, Journeyman 2**

Designing of ducts for air conditioning and ventilating systems; theory of air flow, velocity reduction, static regain, and equal friction methods; making of field drawings; order and specification sheets; organizing and placing a job.
Prerequisites: Sheet Metal Detailing 1, 2, or equivalent.

(5 semester periods)

1215 **Tool Design – Basic**

Review of drafting techniques; dimensions; preliminary layout of drawings, mathematical processes; technical information on types of tools, physical properties of metals, tooling, processes, and materials.
Prerequisites: Mechanical Drafting 1, 2, or equivalent.

(5 semester periods)

1218 **Machine Tool Design**

Drawing and layout of machines, shifts, bearings, gears, and fasteners; technical information on tools, processes, and materials.
Prerequisite: Mechanical Drafting 1, 2, or equivalent.

(5 semester periods)

1224.1 **Assembly Jigs and Fixture Design 1**

Drawing and layout of assembly jigs and fixtures; detail of component parts and sequence of tool design.
Prerequisites: Mechanical Drafting 1, 2, or equivalent.

(5 semester periods)

1224.2 **Assembly Jigs and Fixture Design 2**

Advanced study of technical information on tooling, processing, metallurgy, and materials.
Prerequisite: Basic Tool Design, or equivalent.

(5 semester periods)

1227.1 **Die Design 1**

Mathematics review, dies for cutting blanks; laying out blanking dies; materials used in die making; punch and die details; stops for positioning stock.
Prerequisites: Mechanical Drafting 1, 2, or equivalent.

(5 semester periods)

1227.2 **Die Design 2**

Dies; sectional, lamination, piercing and perforating, self-grinding, bending and forming. Drawing dies for spherical and oval shapes; rectangular drawing dies; expanding dies; heat-treating die steels.
Prerequisites: Mechanical Drafting 1, 2; Die Design 1, or equivalent.

(5 semester periods)

1233 **Cadastral and Topographic Mapping**

Fundamentals as practiced and applied by private and public agencies; methods of plotting; traversing; legal descriptions; lettering.

(5 semester periods)

SUBJECT NO.

1235 **Basic Principles of Photogrammetry**

Review of current photogrammetric methods as applied to medium and large-scale mapping requirements; flight planning procedures and stereoplotting techniques; emphasis on the theory and practice of field control layout for the aerial mapping project.

(5 semester periods)

1250-1329 ELECTRICAL AND ELECTRONICS

1251.1 **Basic Electricity 1 – Direct Current Theory**

Introduction to electrical terminology and definitions; laws of electricity and magnetism; instruments and measurements; electromagnetic induction; the generator and motor; wiring; mathematics and blueprint reading as applied to D.C.

(5 semester periods)

1251.2 **Basic Electricity 2 – Alternating Current Theory**

Characteristics of alternating current; inductance, capacitance; reactance; impedance; power and power factors; laws of series and parallel circuits; principles and characteristics of A.C. machinery and transformers; blueprint reading and mathematics as applied to A.C.
Prerequisite: Basic Electricity 1, Direct Current Theory, or equivalent.

(5 semester periods)

1254.1 **Electrical Wiring Theory 1**

Introduction to electricity, basic tools, equipment and materials; mathematics review; D.C. electricity and apparatus; blueprint reading and specifications; fundamentals of A.C. electricity; specialized tools and equipment.

(5 semester periods)

1254.2 **Electrical Wiring Theory 2**

General, residential, commercial, and industrial wiring methods; lighting; A.C. apparatus; manual and electromagnetic controllers; transformers; basic industrial electronics.
Prerequisites: Electrical Wiring Theory 1, or equivalent.

(5 semester periods)

1255 **Electric Motor Control 1**

Common types and application of manual and electromagnetic motor starters and controllers; diagrams; acceleration and deceleration circuits and equipment.

(5 semester periods)

1257 **Electrical Wiring and Code**

Principles of electrical wiring for light and power, with emphasis upon the national and local codes; wiring systems; electrical systems; methods of installation; motor control devices and power metering and meter testing.

(5 semester periods)

1258 **Marine Electricity**

Marine cables, handling, testing lacing; installation of terminal tubes, stuffing tubes, cable clamps, lugs; layout and installation of equipment and cabling.

(5 semester periods)

SUBJECT NO.

1260 **Electrical Codes and Ordinances**

Codes and ordinances required for the installation of electrical materials and equipment by state and local enforcement agencies.

(5 semester periods)

1262 **Electrical Blueprint Reading and Detailing**

Introduction; types of plans; modifications and other changes; electrical plans; specifications; regulating agencies; residential plans.
Prerequisite: Journeyman electrician status and/or full-time employment in the trade.

(5 semester periods)

1263 **Electrical Estimating**

Preparation of preliminaries; electrical blueprints and drawings symbols; electrical codes and ordinances; take-off procedures; types of building contracts; change-order procedures.

(5 semester periods)

1266.1 **Electrical Power Generation and Distribution 1**

Planning and developing a power system; voltages; grounding; circuit components, low voltage; codes and related associations; planning expansion.

(5 semester periods)

1266.2 **Electrical Power Generation and Distribution 2**

Short circuits; loads; factors determining loads; high voltage; hazardous locations; emergency systems; trends in industrial wiring.

(5 semester periods)

1266.3 **Electrical Power Generation and Distribution 3**

Rules and regulations for overhead electric line construction and electrical safety orders; observance of requirements of the Public Utilities Commission and Department of Industrial Relations.

(5 semester periods)

1267 **Electromechanical Assembly**

A study of the basic fundamentals of assembly; subassembly production techniques; blueprint reading and schematic drawings; other skills required by the electronic production and manufacturing industry; theory and practice of planning; use of tools; selection of materials; fabrication and packaging as related to this field.

(5 semester periods)

1269.1 **Electronic Production Techniques 1**

Shop and theory; fundamentals of electronic production; techniques in using hand tools to prepare electronic assemblies; techniques used in production wiring and soldering.

(5 semester periods)

1269.2 **Electronic Production Techniques**

Shop and theory; principles and techniques of electronic assembly; wire preparation; insulation and sleeving preparation; component evaluation.
Prerequisite: Electronic Production Techniques 1, or equivalent.

(5 semester periods)

SUBJECT NO.

1270 **Electronics – Inspection**

Analysis of wiring, cable, and schematic diagrams; commercial and military specifications for components, hardware, and material; inspection procedures for mechanical and electrical assemblies.

(5 semester periods)

1272 **Electronic Fundamentals and Schematics**

Introduction to electrical terminology and definitions; laws of electricity and magnetism; D.C. and A.C. circuit analysis; reading of schematic diagrams; principles of the vacuum tube.

(5 semester periods)

1275.1 **Electronics – Fundamentals 1** (Direct Current Theory)

Electron theory; electrostatics; definitions; electromatic force; sources of electrical energy; Ohm's law; conductors; circuits; magnetism; Kirchoff's laws, inductance.
Prerequisites: Electronics Mathematics 1, 2, or qualifying test.

(5 semester periods)

1275.2 **Electronics – Fundamentals 2** (Alternating Current Theory)

Sine wave; frequency; values; phase and angle; inductors; capacitors; impedance; power; networks; transformers; time constants; rotary transformers; saturable reactors.
Prerequisites: Electronics Fundamentals 1, Electronics Mathematics 1, 2, or qualifying test.

(5 semester periods)

1275.3 **Electronics – Fundamentals 3** (Vacuum Tube Application and Amplifier Theory)

Thermionic emission; primary and secondary emission; diode; triode; linear and nonlinear characteristics; tube characteristics; bias control; amplification; transconductance; types of tubes.
Prerequisites: Electronics Fundamentals 1, 2, Electronics Mathematics 1, 2, or qualifying test.

(5 semester periods)

1275.4 **Electronics – Fundamentals 4** (Vacuum Tube Application and Amplifier Theory)

Single stage and multistage amplification; R-C coupling; transformer coupling; audio and radio frequency amplifiers; hi-fidelity techniques; oscillators; rectifiers.
Prerequisites: Electronics Fundamentals 1–3; Electronics Mathematics 1, 2, or qualifying test.

(5 semester periods)

1275.5 **Electronics – Fundamentals 5** (Semiconductor Devices)

Semiconductor materials and physics of their structure; diodes; transistors; types of circuit application; frequency response.
Prerequisites: Electronics Fundamentals 1–4; Electronics Mathematics 1, 2, or qualifying test.

(5 semester periods)

1278 **Electronic Test Equipment**

Emphasis on theory and use of meters, oscilloscopes, signal generators, oscillators, bridges, tube and transistor checkers; power and frequency measurement devices; meggers; batteries.

(5 semester periods)

1279 **Electronic Instrumentation**

Various types and kinds of instrumentation available and needed by industry; theory and practice of measuring devices as they apply to commercial and government standards.

(5 semester periods)

SUBJECT NO.

1281.1 **Electronics – Mathematics 1**

Fundamental algebraic operations, geometric equations, roots and exponents, logarithms, basic trigonometry; imagery functions; graphs and functions with applications to electronic problems.

(5 semester periods)

1281.2 **Electronics – Mathematics 2**

Quadratic equations, complex numbers, determinants, and introduction to calculus as applied to electronic problems.
Prerequisite: Electronics Mathematics 1, or equivalent.

(5 semester periods)

1284 **Industrial Electronics – Basic**

Review of electrical theory as applied to electronics; components; electronic tube fundamentals; electric instruments; component testing; tube circuits.
Prerequisite: Electronic Fundamentals, or equivalent.

(5 semester periods)

1291.1 **Traffic Signal and Street Lighting 1**

Labor and management relationships; overview of trade; tools and safety; conduit; foundations – pole and sign; pull boxes; poles, standards, and sign posts; signal heads, luminaires and sign fixtures.
Prerequisite: Utility Technician 2 status and/or full-time employment in the trade.

(5 semester periods)

1291.2 **Traffic Signal and Street Lighting 2**

Layout and blueprint reading as they relate to electrical fundamentals; wire, wiring, and splicing; luminaires and sign fixtures; controllers.
Prerequisite: Traffic Signal and Street Lighting 1; Utility Technician 2 status or equivalent; and full-time employment in the trade.

(5 semester periods)

1292 **Traffic Signal Circuitry**

Fundamentals of traffic signal controllers; basic circuit and design; principles of operation with relation to traffic; related auxiliary equipment; construction principles and field trouble shooting methods needed to install and maintain traffic signal systems.

(5 semester periods)

1294 **Process Instrumentation**

Instrument identification symbols and letters; pressure instruments; volumetric expansion and pressure actuated thermometers; electronic temperature measurement; fundamentals of automatic control; liquid level measurement; control and relief valves; flow measurement; instrument specification writing.

(10 semester periods)

1295 **Refrigeration Servicing**

Basic mathematics and algebra, principles of refrigeration, refrigerants, system components, electricity, basic heat transfer, types of insulation.

(5 semester periods)

1296.1 **Radio Servicing 1**

Radio theory; power supply systems; tuned circuits; oscillators; detectors.

(5 semester periods)

SUBJECT NO.

1296.2 **Radio Servicing 2**

Amplifiers (audio frequency) servicing procedures; use of test equipment; mathematics; servicing – commercial.
Prerequisite: Radio Servicing 1, or equivalent.

(5 semester periods)

1299.1 **Radio and Television Servicing 1**

Shop and theory; principles of radio frequencies, amplifiers in FM and TV receivers; work on amplifiers, detectors, rectifiers; repair and testing of television receivers and radio receivers.
Prerequisite: Radio Servicing, or equivalent.

(5 semester periods)

1299.2 **Radio and Television Servicing 2**

Shop and theory; I.F. amplifiers and detectors; video amplifiers and D.C. restorer; synchronizing circuits; sweep circuits; power supplies; picture tubes; frequency modulation and television receiver alignment; testing and alignment of special television circuits; projector type receivers; use of special test equipment.
Prerequisite: Radio and Television Servicing 1, or equivalent.

(5 semester periods)

1301.1 **FCC Radio Telephone License 1**

Basic Electronics and FCC Rules and Regulations.

(5 semester periods)

1301.2 **FCC Radio Telephone License 2**

Electronics and Radio Theory.
Prerequisite: FCC Radio Telephone License 1, or equivalent.

(5 semester periods)

1302 **Communications – Telephone**

Fundamentals of installation and maintenance of telephone equipment and switchboard currents; study of Ohm's law, electronic theory, and magnetic law as applied to telephone work.

(5 semester periods)

1303 **Communications – Telephone Circuits**

Electric circuits and the electrical transmission of energy; using circuits drawings to install and maintain telephone equipment.

(5 semester periods)

1304 **Communications – Telephone Electronics**

Development of an understanding of the director portion of the Type 53 SATT system; reading of various automatic electric company schematics, including primary selector, controller, call register, coder, sender, call recorder, translator, assigner, codexer; emphasis on overall sequence of the system.

(5 semester periods)

1309 **Telephone Communications for the Deaf**

Instruction supplementing knowledge of those enrolled to improve job skills; principles of sound and of telephone; standard procedures; courtesy, basic use of hearing indicator; maintenance and care of hearing indicator; use of codes; art of asking questions; special phone calls; practice in use of hearing indicator.

(2½ semester periods)

1310 **Telephone Installation and Maintenance**

Basic instruction for the communications worker in drop-wire distribution, grounding, personal protection and safety, telephone instrument and circuitry, maintenance and trouble-shooting; including information concerning Public Utility Commission rules and regulations.

(5 semester periods)

1311 **Transistors**

Introduction to the theory and operation of basic semiconducting devices, with special emphasis on fundamental ideas and concepts rather than on detailed mathematical treatment; basic semiconductor physics; types of transistors and their operation; transistors in selected electronic circuits.

(5 semester periods)

1313.1 **Introduction to Digital Computers 1**

Fundamental concepts of design, construction, and operation of digital computers; historical background; comparison of analog and digital computing techniques.

(5 semester periods)

1313.2 **Introduction to Digital Computers 2**

Number systems and introductory Boolean algebra; basic programming techniques; detailed investigation of the memory element; input/output device; arithmetic section; and control element.
Prerequisite: Introduction to Digital Computers 1, or equivalent.

(5 semester periods)

1330-1364 GRAPHIC ARTS

1331.1 **Photography 1**

Fundamentals of cameras and photographic equipment; taking, developing, printing, and enlarging pictures; study of optics of the camera, enlarger, lenses; applied chemistry of the development and processing of films and paper.

(5 semester periods)

1331.2 **Photography 2**

Taking, developing, and printing of interior and exterior photographs; types of cameras and photographic equipment; darkroom techniques; lighting, shooting, color, light measurements, camera adjustments, focusing, shutter speeds, filters, color pictures.
Prerequisite: Photography 1, or equivalent.

(5 semester periods)

1334.1 **Color Photography 1**

Still and motion pictures in color; principles of still and motion picture cameras for amateur use; lenses; depth of field principle; filters; composition; lighting; editing of interior and exterior subjects; titling; availability of proper materials for still and motion picture color photography.

(5 semester periods)

1334.2 **Color Photography 2**

Review of principles and processes of Color Photography 1; special lighting, flood, flash, stroboscopic, color harmony; special lenses; portraits; still life; action shots; landscapes; special effects; close-ups and microscopic photographs; story content, drama, impact, mood; use of sound strip.
Prerequisite: Color Photography 1, or equivalent.

(5 semester periods)

SUBJECT NO.

1337.1 **Cinema Photography 1**

Fundamentals of motion picture cameras, films, and equipment; taking motion pictures; making titles.

(5 semester periods)

1337.2 **Cinema Photography 2**

Editing; story development; script writing; animation; music background; narration; sound synchronization; special and trick photographic effects.
Prerequisite: Cinema Photography 1, or equivalent.

(5 semester periods)

1341 **Photographic Equipment Repair**

Techniques in, and concepts of, repair of various types of still and movie cameras, projectors, and photographic equipment.

(5 semester periods)

1343.1 **Printing 1 – Composition**

Introduction to shop facilities; employment opportunities; history and background of printing; trade practices; hot- and cold-type composition; safety.

(5 semester periods)

1343.2 **Printing 2 – Letter Presswork**

Advanced shop practice; letterpress printing; hand- and machine-typesetting; makeup, lockup; platen presswork; automatic small- and large-cylinder presswork; paper-figuring; safety; related phases of the printing industry.
Prerequisite: Printing 1, or equivalent.

(5 semester periods)

1346.1 **Offset Stripping and Platemaking**

Shop and theory; making and stripping single page, two- and four-page; color work; burning; developing and preserving plates; care of equipment and materials.

(5 semester periods)

1346.2 **Offset Presswork**

Shop and theory; principles of popular offset and letterpress presses; care, maintenance, and operation of popular letterpress and offset presses; simple bindery operations.
Prerequisite: Offset Lithography 1, or equivalent.

(5 semester periods)

1349.1 **Commercial Art and Lettering 1**

Advertising lettering; production layout; showcard writing; silk-screen processing; package design; poster lettering; sign design and layout; background displays.

(5 semester periods)

1349.2 **Commercial Art and Lettering 2**

Advanced study of reproduction methods; production of posters, signs, and other art media.
Prerequisite: Commerical Art and Lettering 1, or equivalent.

(5 semester periods)

SUBJECT NO.

1351 **Sign and Show Card Painting**

Shop and theory; fundamentals of sign painting and lettering; layouts; color display construction; sign construction; introduction to the silk screen process.

(5 semester periods)

1352 **Publication Art** (From Concept to Printing)

Skills and tools used in graphic layout of publications; estimating; finished art preparation; copyfitting; photo and printing processes; imposition and presswork; paper and ink; binding and finishing.

(5 semester periods)

1355.1 **Technical Writing and Editing 1**

Basic techniques required of the technical writer-editor in preparation of material for scientific and industrial publications; review of sentence and paragraph structure; logical organization and development of the technical publication.

(5 semester periods)

1355.2 **Technical Writing and Editing 2**

Advanced techniques of editing; preparation of copy and art; selection of lithographic and other reproduction methods.
Prerequisite: Adequate preparation in grammar and English usage.

(5 semester periods)

1359 **Catalog Parts Compiling**

Techniques used in development of parts catalogs for both commercial and military publications industry; fundamentals of parts listing, indenture, indexing, illustrations, quantities, and coding; general techniques for computer processing and final preparation of finished publications.

(5 semester periods)

1360.1 **Horticulture 1 – Home Gardening**

Fundamentals of propagation and growth of flowers, plants, and trees; skills and techniques of gardening and nursery practice; home gardening.

(5 semester periods)

1360.2 **Horticulture 2 – Home Gardening**

Advanced course in covering soils, watering, cultivation, pest control, fertilization, pruning, and propagation.

(5 semester periods)

1361 **Landscaping**

Planning and laying out of a home garden, walks, patios, lawns; selection and location of trees, shrubs, vines, and flowers.

(5 semester periods)

1362 **Maintenance Gardening**

Rules and regulations; organization and procedures; human relations; standards of work; daily work schedules; job planning and problems relevant to gardening services; use and maintenance of power mowers and other power equipment; care of gardening tools; replacement and requisition procedures.

(5 semester periods)

SUBJECT NO.

1363 **Floriculture – Evaluation**

Flower show practices; study of materials; point judging; flower and plant arrangement; color and design; contemporary and period landscape effects.

(5 semester periods)

1364 **Tree Trimming**

Tree identification; structure; diseases; pruning; hand tools; cabling; ladders; safety.

(5 semester periods)

1365-1419 METAL

1365.1 **Metal Shop 1**

Shop and theory; skills; processes on bench metal, sheet metal, art metal, ornamental iron, and metal castings.

(5 semester periods)

1365.2 **Metal Shop 2**

Shop and theory; skills; processes on various metal work; forging; heat treating; machine shop practice and welding.
Prerequisite: Metal Shop 1, or equivalent.

(5 semester periods)

1366 **Sheet Metal – Aircraft**

Shop and theory; fundamentals of aircraft structural mechanics; tools, materials, coatings; blueprint reading; layout and templates; bending equipment; riveting, countersinking, stiffeners, corner ties; terminology.

(5 semester periods)

1367 **Marine Pipe Fitting**

Theory class: Ship's nomenclature and compartmentation; pipe and tubing material; pressures; valves, temperature control regulators, traps, and stainers; fuel oil systems, lubricating oil systems; water and steam systems; retubing; distilling; air and oil systems; aircraft fuel. Layout, bending, and targeting.

(5 semester periods)

1368.1 **Machine Shop 1**

Shop and theory; shop safety; hand tool usage; chipping and filing; shop mathematics; blueprint reading; measurement and layout; drilling machines.

(5 semester periods)

1368.2 **Machine Shop 2**

Shop and theory; engine lathes and their operation, tapering, boring, and threading; shapers and their operation, shaping plain and irregular work; metal-cutting band saws and their operation.
Prerequisite: Machine Shop 1, or equivalent.

(5 semester periods)

1368.3 **Machine Shop 3**

Shop theory; operation of milling machines, vertical, horizontal, and universal; operation of grinding machines, surface, cylindrical, and universal; heat treating.
Prerequisite: Machine Shop 1, 2, or equivalent.

(5 semester periods)

SUBJECT NO.

1368.4 **Machine Shop 4**

Shop and theory; operation of turret lathes; tooling for special machines; machine shop production techniques; basic die work.
Prerequisites: Machine Shop 1, 2, or equivalent.

(5 semester periods)

1369 **Machine Control Systems** (Introduction)

Fundamentals of Machine Control Systems; the installation, operation, and maintenance procedures of automatic machines as related to basic control systems pertinent to numerical control.

(5 semester periods)

1369.5 **Electrochemical Metal Removal Processes**

Theory of electrochemical metal removal; electrochemical milling, machining, grinding; problem solving.

(5 semester periods)

1370 **Numerical Control Maintenance**

Installation, operation, and maintenance procedures for use with automated machinery as related to basic control systems.

(5 semester periods)

1371.1 **Precision Inspection 1**

Use and care of precision instruments; review of blueprint reading; mathematics pertinent to precision inspection.

(5 semester periods)

1371.2 **Precision Inspection 2**

Continuation of precision inspection, with emphasis on demonstration and practical application.
Prerequisite: Precision Inspection 1, or equivalent.

(5 semester periods)

1373 **New Metal Working Processes**

Electrical discharge machining; electrical chemical machining, grinding, burring, polishing, forming; tungsten inert gas welding; plasma torches; ultrasonic energy; magnetic forming; capacitor discharge forming; chemical explosives; biaxial hydroforming; controlled milling and drilling; tube tapering and wire drawing; akate machining; exploring new methods.

(5 semester periods)

1374.1 **Welding – Acetylene 1**

Shop and theory; physical properties of ferrous and nonferrous metals; types of welds and joints; principles of burning, welding, and brazing.

(5 semester periods)

1374.2 **Welding – Acetylene 2**

Shop and theory; horizontal, vertical, and overhead-position welding; plate and joint preparation; effect of heat on metal; metal properties; principles of soldering and brazing.
Prerequisite: Welding – Acetylene 1, or equivalent.

(5 semester periods)

1377.1 **Welding – Arc 1** (Flat Position)

Shop and theory; principles of arc welding; practice in horizontal-position welding.
Prerequisite: Welding – Acetylene 1, or equivalent.

(5 semester periods)

SUBJECT NO.

1377.2 **Welding – Arc 2 (Vertical Position)**

Shop theory; making welds on mild steel in horizontal and vertical positions.
Prerequisites: Welding – Acetylene 1 and Arc 1, or equivalent.

(5 semester periods)

1377.3 **Welding – Arc (Horizontal and Overhead Positions)**

Practical application of all types of welds in all positions; preparatory to taking A.W.S. tests.

(5 semester periods)

1380.1 **Welding – Inert Gas 1**

Shop theory; theory and processes of inert gas welding; emphasis on safety and economy in use of equipment.
Prerequisites: Welding – Acetylene 1 and Arc 1, or equivalent.

(5 semester periods)

1380.2 **Welding – Inert Gas 2**

Shop and theory; applied techniques in welding with inert gas on sheet metal, pipe, and alloy steels.
Prerequisite: Welding – Inert Gas 1, or equivalent.

(5 semester periods)

1384.1 **Shipfitting 1**

General orientation of the shipfitters trade; nomenclature; blueprint reading; planning and lofting; material preparation and control; assembly and welding; safety.

(5 semester periods)

1384.2 **Shipfitting 2**

Advanced blueprint reading; 1/10 and full-scale lofting; various assembly methods; advanced welding and burning; safety.

(5 semester periods)

1384.3 **Shipfitting 3**

Review of blueprint reading; shop nomenclature; template making; duplication of templates; shop assembly; layout, foundation layout and outfitting layout.
Prerequisite: Shipfitting 1, 2, or equivalent.

(5 semester periods)

1385 **Marine Machinist**

Principles of machine tools, lubricants, measurement, propulsion and steering, diesel engines, boilers, hydraulics and air compressors.

(5 semester periods)

1386.1 **Pressure Vessel Code 1 – Unfired**

Types of materials used; corrosion; strength of materials; welding; riveting; brazing; types of joints; design of pressure-vessel components; and other problems encountered in unfired pressure vessels.

(5 semester periods)

1386.2 **Pressure Vessel Code 2 – Fired**

Design, fabrication, erection, repair, and inspection of power boilers, and pressure vessels; related stress, metallurgy, assembly, piping, support, and other problems.

(5 semester periods)

SUBJECT NO.

1389.1 **Heating, Ventilating, and Air Conditioning 1**

Heating, ventilating, and air conditioning theories and methods; properties and application of fuses; venting principles; heating transfer and heating load theory; construction affecting air conditioning installation.

(5 semester periods)

1389.2 **Heating, Ventilating, and Air Conditioning 2**

Continuation of heating systems; theory of air distribution systems; controls for heating and air conditioning; air conditioning cost estimating; cooling systems theory; refrigeration cycle principles; heating theory and measurements; cyclemetrics; equipment selection.
Prerequisite: Heating, Ventilating, and Air Conditioning 1, or equivalent.

(5 semester periods)

1390 **Heating, Ventilating, Refrigeration and Air Conditioning Controls**

Fundamentals of heating, ventilating, refrigeration, and air conditioning equipment; controls and their applications; calibration.

(5 semester periods)

1391 **Installation and Maintenance of Domestic Air Conditioners**

Shop and theory; service tools; mechanical cycle; electrical cycle; refrigerants; package units; control systems; water treatment; customer relations.

(5 semester periods)

1392.1 **Refrigeration and Air Conditioning 1**

Basic refrigeration principles; refrigeration cycles, water cooled condensers, evaporative condensers; thermostatic expansion valve; system control, sequence of operation; gauge reading and interpretation; electrical principles; lubrication; safety.

(5 semester periods)

1392.2 **Refrigeration and Air Conditioning 2**

Refrigeration-system controls; operational sequence; electrical principles, wiring diagrams, motors, and measuring instruments; lubrication; gauge reading and safety practices.
Prerequisite: Refrigeration and Air Conditioning 1, or equivalent.

(5 semester periods)

1395.1 **Refrigeration and Steam Plant Operation 1**

Principles of refrigeration and steam plant operation; basic thermodynamics; heat transfer; elementary fluid flow; humidity; psychometric theory.

(5 semester periods)

1395.2 **Refrigeration and Steam Plant Operation 2**

Refrigeration cycle; refrigerants; basic auxiliary equipment; pumps for steam plant operation; steam generators; water treatment; heat exchangers; turbo generators.
Prerequisite: Refrigeration and Steam Plant Operation 1, or equivalent.

(5 semester periods)

1398.1 **Air Balancing and Testing 1**

Development of charts; air duct design; balance procedures, developing and building mock-ups.

(5 semester periods)

SUBJECT NO.

1398.2 **Air Balancing and Testing 2**

Development of charts; air duct design; balance procedures; developing and building mock-ups.
Prerequisite: Air Balancing and Testing 1, or equivalent.

(5 semester periods)

1401.1 **Thermoplastic Plastics Fabrication 1**

General nature and physical properties of thermoplastic plastics; layout principles; maintenance of tools and machines.

(5 semester periods)

1401.2 **Thermoplastic Plastics Fabrication 2**

Review of thermoplastics; production planning; hand tool and machine operations; jointing, forming heating, finishing and decorating; experimenting with new materials and methods.
Prerequisite: Thermoplastic Plastics Fabrication 1, or equivalent.

(5 semester periods)

1404.1 **Thermosetting Plastics 1**

History of plastics; safety, tooling for thermosetting plastics; thermosetting processing; laminating techniques; vacuum bag processes; curing and machinery processing.

(5 semester periods)

1404.2 **Thermosetting Plastics 2**

Advanced thermosetting plastic processes; tooling, resin systems; curing, repairing, and finishing techniques; sandwich structures and adhesive bonding; safety.
Prerequisite: Thermosetting Plastics 1, or equivalent.

(5 semester periods)

1405 **Clock Repair**

Shop and theory; clock dismantling, cleaning, reworking parts, lathework, adjusting timepiece, and reassembly.

(5 semester periods)

1407.1 **Millwright – Hydraulics 1**

Operation and maintenance of hydraulic systems.

(5 semester periods)

1410 **Review of Hydraulic Problems – Open Channel Flow**

Penstock problems; flood predictions; various types of backwater curves; momentum curves; disposal of precipitation involving use of open channel flow; theory of the steady flow of water in open channels.

(5 semester periods)

1413 **Mechanical Shaft Seals**

Design, construction, installation, operation, maintenance, and fundamental principles of shaft seals, pumps, and turbines; blueprint reading; densities and action of fluids; chemical effects on pumps and seals; hazards of, and elimination of, vibration and extreme temperatures on all types of mechanical seals.

(5 semester periods)

1415 **Care and Maintenance of Medical Equipment**

Fundamentals of heat, temperature and steam; principles of sterilization; system components; sterilizer controls; steam consumptions and heat losses; ultrasonics and sound; and factors influencing; ethylene oxide gas sterilization.

(5 semester periods)

SUBJECT NO.

1420-1459 PERSONAL AND PUBLIC SERVICE

1421 **Survey of Engineering Operations**

The engineering process; city planning; financing; fields of engineering applications; materials and applications; construction; urban concern.

(2½ semester periods)

1423 **Civil Engineering Calculations**

Geometric design of rural highways; dam problems; hydraulics; introduction to sewage treatment; elementary structures.

(5 semester periods)

1424 **Civil Engineering Fundamentals Review**

Review of structural theory design in steel, concrete, and timber; earthquake design; hydraulics; survey; highway engineering; engineering economics.

(5 semester periods)

1425 **Boundary Surveying**

Surveying lines; their status, their establishment and re-establishment; the duties and obligations of the surveyor; California law; professional ethics and responsibilities.

(5 semester periods)

1426.1 **Trigonometry as Applied to Road Surveying**

Practical surveying problems, using trigonometric functions, right angles, oblique triangles, radian measure and circular arcs, parabolic curves, trigonometric solutions of polygons; state coordinate system.

(5 semester periods)

1426.2 **Beginning Road Surveying**

General survey practices; linear measurements; leveling on plane; tranist work; azimuths and bearings; machine calculators; slide rule instructions; simple traverse; circular curves; parabolic curves; public land surveys; road construction surveys.

(5 semester periods)

1426.3 **Advanced Problems in Road Surveying**

Traverse problems; stations at intersections; curve through-a-given-point problem; horizontal curve problems; vertical curve problems; earthwork problems; stadia topography problems; land subdivision problems; cul-de-sac; horizontal control.

(5 semester periods)

1426.4 **Advanced Road Surveying**

Recording survey data for public records; road construction surveys; construction grade sheets; staking for drainage structures; plan checking; road surveys for improvements of new roads.

(5 semester periods)

1427.1 **Electrical Engineering Fundamentals Review 1**

Review of electrical engineering fundamentals.

(5 semester periods)

1427.2 **Electrical Engineering Fundamentals Review 2**

A.C. and D.C. theory; circuits; transmission lines; symmetrical components.

(5 semester periods)

SUBJECT NO.

1428 **Calculus Review – Engineering**

Principles of calculus with emphasis on engineering problems; differentiation of transcendental functions; integration of rational fractions; review of other equations, formulas, and problems.

(5 semester periods)

1429 **Techniques of Valve Analysis and Engineering**

Theory techniques, cost of valve engineering, ideation, speculation, analytic planning, execution and presentation phases.

(5 semester periods)

1430 **Elementary Mechanics – Engineering**

Elements of statics and dynamics and their application to engineering problems; forces and reactions; vector representation; composition and resolution of forces; moments of inertia, acceleration, velocity, power, and energy; and elementary mechanics of fluids.

(5 semester periods)

1431 **Petroleum Processes**

Basic petroleum processes; survey of the broader elements of the industry; total refinery processes.

(5 semester periods)

1432 **Construction Specifications and Contracts**

Elements of construction specifications; contracts from the engineer's viewpoint; general conditions; special specifications, material specifications; instructions to bidders, bid documents, bidding procedures; change orders; construction contracts; contract law.

(5 semester periods)

1433 **Engineer-in-Training Refresher**

Review of fundamental physics, chemistry, and mathematics as applied to engineering problems; mechanics of solids and fluids; application of the equation of state, energy, and motion; elementary problems in light, heat, and sound.

(5 semester periods)

1434 **Hydraulic Engineering Review**

Review of fluid mechanics; open channel and pipe flow; hydrology and ground water concepts; hydraulics of pumps, pumping, water systems, and water power; economics as pertaining to hydraulics; design of hydraulic structures. This course is specifically designed to meet the needs of men who plan to take the hydraulic option in the California State Civil Engineering Registration Examination.

(5 semester periods)

1435.1 **Introduction to Stress and Deflection 1**

Mathematic fundamentals; loads from basic machines; weight calculations; center of gravity; elements related to force; design attack; load classification; stress and strain.

(5 semester periods)

1435.2 **Introduction to Stress and Deflection 2**

Tensile stress and strain test; internal and external forces; structural materials; bending stress; bending deflection; structural shapes; supervised problem "Lab."

(5 semester periods)

SUBJECT NO.

1436 **Appliance Servicing**

Essential basic mathematics, mechanics, and electricity; basic chemistry of water and metals; electric motors and devices used in home appliances; blueprint reading; plumbing practices, nomenclatures, and codes; service and repair of small appliances; gas and electric ranges; clothes washers, dryers, and ironers; disposers and dishwashers; methods of trouble analysis and trouble shooting; elements of customer relations and salesmanship.

(5 semester periods)

1437 **Processing Milk Products**

Composition of milk; processing procedures; laboratory procedures; weights and samples; refrigeration; insect and rodent control; cleanup; storage; safety.

(5 semester periods)

1438 **Commercial Baking**

Techniques in volume baking; decoration; principles in use of variety of recipes, etc.

(5 semester periods)

1439.1 **Cosmetology 1**

Review of the theory and practical skills required by the California State Board of Cosmetology.

(5 semester periods)

1439.2 **Cosmetology 2**

Training in the new techniques of hairdressing and styling.
Prerequisite: Open only to persons with trade experience desiring to obtain or renew licenses issued by the California State Board of Cosmetology.

(5 semester periods)

1440 **Hair Styling For Men**

Basic chemistry; types of preparations; radial cut, hair setting, hair straightening, hair coloring and bleaching, make-up.

(5 semester periods)

1442.1 **Custodial Engineering 1**

Cleaning techniques for floors, walls, windows; cleaning, servicing, and minor maintenance of building fixtures; standard and emergency operating procedures.

(5 semester periods)

1442.2 **Custodial Engineering 2**

Principles and techniques of boiler operation; fuels and fuel systems; unit-heating systems; ventilating systems.

(5 semester periods)

1442.3 **Custodial Engineering 3** (Supervision)

Principles of supervision; inspection of building and grounds; control of supplies and equipment; record-keeping; management of personnel.

(5 semester periods)

SUBJECT NO.

1445 **Commercial Pool Servicing**

Principles of maintenance, operation, repair, or construction of swimming pools, including pool design and operation; legal requirements; hydraulics, general construction; filters, gauges, feeders, indicators, chlorination, chemicals, coagulants, and P.H. control.

(5 semester periods)

1449.1 **Water Distribution System Practice 1**

Current practices in design of water distribution system, construction, and operation; water mains, services, meters, regulators, and valves.

(5 semester periods)

1449.2 **Water Distribution System Practice 2**

Reading grade stakes; locating mains and service; excavation and backfill; regulators; fire hydrant; gate valves; blocks; tank operation; pipe.
Prerequisite: Water Distribution System Practice 1, or equivalent.

(5 semester periods)

1451.1 **Steam Plant Operation 1 – Basic**

Operation principles of equipment used in modern steam-heating plants; fuel oil; gas-fired furnaces; ventilating systems; diagnosing troubles and safe operating practices.

(5 semester periods)

1451.2 **Steam Plant Operation 2 – Basic**

Steam plant science; power plant efficiency and calculations; fuels and combustion; water treatment.
Prerequisite: Steam Plant Operation 1, or equivalent.

(5 semester periods)

1451.3 **Steam Plant Operation 3 – Mathematics**

Basic mathematics: plane geometry, algebra, and graphs as related to steam plants; physical and chemical processes relating to steam plants; use of steam tables, graphs, and charts.

(5 semester periods)

1452 **Steam Plant Operation – Pneumatic Controls**

Principles of steam plant operation and maintenance; pneumatic controls; systems and basic controls; thermostat; pressure controls; valves; operators; unit heaters.

(5 semester periods)

1454.1 **Nuclear Energy and Power Plant Applications 1**

Principles of atomic structure; principles of radiation protection, fission, fusion, and energy release.

(5 semester periods)

1454.2 **Nuclear Energy and Power Plant Applications 2**

Nuclear reactors; nuclear fuels; reactor controls and instrumentation; commercial development of nuclear energy applied to power plant operation.
Prerequisite: Nuclear Energy and Power Plant Applications 1, or equivalent.

(5 semester periods)

1455 **Marine Training – Marine Fireman and Oiler**

Boilers and their operation; fuel oil system; water system; turbine engines.

(5 semester periods)

SUBJECT NO.

1457.1 **Vocational Rehabilitation 1**

Occupational rehabilitation for persons seeking employment.

(5 semester periods)

1457.2 **Vocational Rehabilitation 2**

Development of hand skills; plastic and woodworking; mending; painting; garment design and cutting; use of power sewing machines.

(5 semester periods)

1460-1474 SUPERVISION

1461.1 **Industrial Supervision 1 – Beginning**

Survey course in the principles of supervision in industrial plants, covering essentials of organization, employee and employer relations, industrial economics, labor relations, records and reports.

(5 semester periods)

1461.2 **Industrial Supervision 2 – Intermediate**

Detailed study of the total responsibilities of the supervisor in industry, as follows: organization, selection, placement, and training of personnel; labor relations and laws; and the basis of management.

(5 semester periods)

1461.3 **Industrial Supervision 3 – Advanced**

General principles and concepts of company management; production planning and control; practical applications to the areas of manpower, materials, manufacturing, quality, and financial planning and control.

(5 semester periods)

1466.1 **Manufacturing Cost Estimating 1**

Manufacturing engineering estimations; tests and equipment; labor costs; learning curve and calculations; burdens and profit; special estimating techniques.

(5 semester periods)

1466.2 **Manufacturing Cost Estimating 2**

Initiation of cost request; methods of estimating; cost estimate; manufacturing plan; estimating costs of labor, materials; inspection, testing, and packaging; accounting procedures.

(5 semester periods)

1468 **Management – Steam Plant Maintenance**

Steam plant record-keeping; maintenance reports; cost factors; parts control; ordering supplies; bid procedures; duty assignments; personnel relations; steam plant safety; maintenance problems.

(5 semester periods)

1475-1484 TEXTILE AND APPAREL

1476.1 **Upholstery 1**

Tools, equipment, materials, furniture frames; construction methods and techniques; basic power sewing, padding and final-cover application.

(5 semester periods)

SUBJECT NO.

1476.2 **Upholstery 2**

Frame preparation; unit construction of arms, wings, seats, backs; cover layout, cutting final cover and trim application; cost estimating of jobs.
Prerequisite: Upholstery 1, or equivalent.

(5 semester periods)

1479.1 **Power Sewing – Single Needle 1**

Shop and theory; power control; care and operation of machine.

(5 semester periods)

1479.2 **Power Sewing – Single Needle 2**

Use of commercial patterns; construction of details; garment assembling; safety practices.

(5 semester periods)

1482.1 **Power Sewing – Special Machines 1**

Shop and theory; power control; care and operation of special machines – overlock; two-needle shirrer, buttonhole, blindstitch, and hemstitch.
Prerequisite: Power Sewing – Single Needle, or equivalent.

(5 semester periods)

1482.2 **Power Sewing – Special Machines 2**

Proper use of commercial patterns; construction of detail and garment assembling; safety practices.
Prerequisite: Power Sewing – Single Needle, or equivalent.

(5 semester periods)

1482.3 **Fashion Illustration**

Fundamentals of proportion, and the mechanics of constructing a fashion figure; basic garment shapes; drawing techniques and art media; methods of presentation; history of fashion illustration and wearing apparel.
Prerequisite: None – sketching ability desirable.

(5 semester periods)

1485-1499 WOODWORKING

1486.1 **Woodworking 1**

Shop and theory; basic hand tools skills and processes; operation of woodworking machinery; wood finishing; emphasis upon workmanship, construction, design, finish, and safety practices.

(5 semester periods)

1486.2 **Woodworking 2**

Shop and theory; advanced study in the use of hand and power tools, including portable electric tools and spray guns; wood finishes; home repair; furniture and boat construction.
Prerequisite: Woodworking 1, or equivalent.

(5 semester periods)

SUBJECT NO.

1489.1 **Furniture Repair and Finishing**

Shop and theory; selection and use of hand tools, material, and equipment.
Prerequisite: Woodworking 1, or equivalent.

(5 semester periods)

1489.2 **Cabinetmaking and Millwork**

Shop and theory; lumber measurement and estimation; detailing and stockbilling; machine work; geometrical layouts; production procedures; plastic laminations; layout and construction of millwork; veneers; modular construction; hardware; glass and mirrors.
Prerequisite: Furniture Repair and Finishing.

(5 semester periods)

1490 **Detailing and Stockbilling**

Shop and theory; fundamentals of mechanical and architectural drafting; detail drawings and stockbill analysis; planning details; securing site dimensions.

(5 semester periods)

1497 **Shipwright, Joiner, and Boatbuilder**

Fundamentals of the shipwright, joiner, and boatbuilder trade as applied in the naval and civilian shipyards: The techniques applied in scaffolding, decking, layout lines and transit, dry-docking, blueprint reading and plastic boatbuilding.

(5 semester periods)

1500-1599 PRE-EMPLOYMENT TRADE AND TECHNICAL EDUCATION

SUBJECT NO.

1500-1504 AEROSPACE

1501 **Aircraft Assembly**

Pre-employment information about sheet metal assembly for aircraft; interpretation of blueprints and control and processing of documents; use of aerospace structure tools; preparation of simple layouts; application and identification of sealants; drilling, countersinking, and installing of rivets. **(10 semester periods)**

1505-1508 APPAREL

1505 **Garment Making**

Shopwork and theory; sewing techniques; draping and patternmaking; grading; garmentmaking, sketching, theory of designing; care and maintenance of equipment, threading machines, needle identification; identification and use of attachments; construction of garment detail, garment assembly, and construction. **(30 semester periods)***

1506 **Upholstery**

Shopwork and theory; upholstering of footstools, benches, chairs, chaise lounges, and davenports; materials and fabrics; methods and techniques of springing, stuffing, covering, and cushion working. **(10 semester periods)**

1507 **Power Sewing**

Care and operation of single needle machines; special machines; embroidery machines. **(10 semester periods)**

1508 **Dressmaking**

Orientation to the garment industry and related opportunities; use of power sewing machines and production methods; practices and procedures in wearing apparel construction in jobs typical of the industry. **(30 semester periods)***

1510-1514 COMMERCIAL ART

1510 **Commercial Art Production**

Advertising lettering; production layout; show card writing; silk-screen processing; package design and production; poster lettering and art; neon-sign design and layout; atmospheric and geographic backgrounds for displays. **(10 semester periods)**

1511 **Technical Illustration**

Isometric and orthographic projections, oblique and perspective drawings, freehand sketching, and technical drawing of parts and assemblies; translation of mechanical drawings and blueprints to pictorial illustrations; proper tools and materials; processes for reproduction of illustrations. **(10 semester periods)**

1515-1529 AUTOMOTIVE

1515 **Auto, Body, and Fender Repair**

Shopwork and theory; basic techniques used in removing and replacing bent and buckled metal; replacing and aligning damaged side panels, steel tops, fenders, woods; soldering, welding, grinding, sanding, washing, polishing, waxing, steam-cleaning, painting touch-up, interior cleaning, spotting, and detailing. **(10 semester periods)**

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*Credits can be earned up to maximum number indicated.

SUBJECT NO.

1516 **Auto Front-End Alignment and Brakes Installation**

Shopwork and theory; principles involved in suspension, steering, power steering, wheel alignment, wheel balance, hydraulic and power brakes; disassembly, inspection, reassembly and adjustment of suspension and steering systems; installation of brake lining and shoes; arc grinding, shoe reconditioning, drum turning, and complete servicing of braking systems.

(10 semester periods)

1517 **Auto Tune-Up**

Shopwork and theory; electrical, carburetor, and fuel systems; checking of complete engine performance, making tests and adjustments; use of test equipment and the dynamometer.

(10 semester periods)

1518 **Motorcycle Mechanic**

Shop and theory; orientation to motorcycle industry; internal combustion engine, assembly and disassembly; electrical system; lubrication system; power transmissions; frame and suspension; wheel and brake; tests, instruments and tune-up.

(25 semester periods)*

1530-1539 CONSTRUCTION AND MAINTENANCE

1530 **Office Machine Repair**

Shop work and theory; the disassembly, repair, reassembly, and adjustment of manual and electric typewriters; manual and electric adding machines; and calculators of all frequently used types.

(30 semester periods)*

1531 **Household Appliance Repair**

Shop and theory; disassembly, assembly, repair, care and maintenance of household washers, dryers, combinations, disposals, refrigerators and small air conditioning units.

(25 semester periods)*

1532 **Brickmasonry**

Shop and theory; orientation to work and to the masonry trade; tools and equipment; materials; mathematics and geometrical lay out; and techniques of brick- and blocklaying.

(30 semester periods)*

1535 **Plastering**

Shop and theory; interior and exterior plastering, ornamental plastering; application of plastering materials; basic mathematics and blueprint reading.

(25 semester periods)*

1537 **Carpentry**

Shop and theory; hand tools; concrete forms; construction layout; machine operation; framing; finishing; building materials; trade mathematics; blueprint reading; codes and ordinances; estimations.

(30 semester periods)*

1539 **Locksmithing**

Shop and theory; work requirements; tools and equipment; building hardware; parts catalogs; customer relations; new work installation; construction hardware; keys and lock cylinders; masterkeying automotive locks; specialties.

(30 semester periods)*

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*Credits can be earned up to maximum number indicated.

SUBJECT NO.

1545-1554 FOOD SERVICE

1545 **Commercial Food Preparation**

Shop and theory; decorating pastries for hot and cold buffets; holidays, and special occasions; decorating cakes with figures, lettering, rising gum paste, marzipan to create flowers; use of border work, special cakes; breakfast dishes, salads, vegetables, variety and ground meat, sauces and gravies, desserts; flavors, extracts, seasonings, herbs; menus and merchandising; canned food, types of food service, food costs, and purchasing.

(25 semester periods)*

1547 **Catering and Methods for Commercial Use**

Orientation to the fundamental skills associated with the preparation and service of foods for commercial use.

(5 semester periods)

1555-1564 DRAFTING

1555 **Architectural Drafting**

Shopwork and theory; basic principles in drawing of house plans, construction as required by City of Los Angeles building codes; emphasis on construction and detailing of windows and doors, fireplaces and chimneys, stair layouts, cabinets, symbols, new building materials, heating; historic styles, sketching, shading, perspective, and simple rendering.

(25 semester periods)*

1556 **Mechanical Drafting and Blueprint Reading**

Orthographic and isometric drawings of machine parts, shop details, and sections; orthographic and pictorial drawings of machine parts, shop details, auxiliary projections, screws and threads; geometrical problems and development of mechanical motions, rivets, keys and fastenings, shop detailing; interpretation of three-view drawings; sections; isometric and oblique drawings; development of plans; elevations and details; reading of blueprints.

(15 semester periods)*

1570-1579 ELECTRONICS

1570 **Electronic Assembly**

Shopwork and theory; fundamentals of assembly, subassembly, production techniques; blueprint and schematic interpretations; skills required in the electronics production and manufacturing industry; theory of, and practice in, planning; use of tools; selection of materials; fabrication and packaging as related to this field.

(5 semester periods)

1571 **Radio and Television Repair**

Shop and theory; repairing and testing of television and radio receivers.

(30 semester periods)*

1580-1589 METALS

1580 **Welding – Electric and Gas**

Shopwork and theory; welding of mild steel in horizontal, vertical, overhead, and/or flat positions; arc-air cutting; machine cutting; use of inert gas; six welding methods involving stainless as well as mild steel, titanium, aluminum, and magnesium.

(20 semester periods)*

1584 **Sheet Metal**

Basic employment information, materials of the trade, shop mathematics, basic drafting, pattern drafting, tool processing, hand tool skills, machine processes, machine operation, and sheet metal fabrication.

(25 semester periods)*

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*Credits can be earned up to maximum number indicated.

SUBJECT NO.

1590-1594 PRINTING

1590 **Offset and Letterpress Printing**

Shop work and theory; fundamentals of hand and machine composition; cold type, platen, and job cylinder letterpress presswork; simple bindery operations.

(30 semester periods)*

1595-1599 SERVICE TRADES

1595 **Cosmetology**

Manicuring; facials; permanent waving; tinting and bleaching; shampooing; rinsing; haircutting; scalp treatments and reconditioning; hair styling.

(30 semester periods)*

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*Credits can be earned up to maximum number indicated.

1600-1649 MUSIC EDUCATION

SUBJECT NO.

1600-1607 INSTRUMENTAL

1601 **Instrumental Techniques**

Basic techniques used in playing instruments of the orchestra; band and other instruments used for accompaniment and solo work – guitar, accordion.

(5 semester periods)

1603 **Orchestra**

Orchestral repertoire, including the classical, romantic, and modern compositions.
Prerequisite: Ability to be determined by director.

(5 semester periods)

1605 **Band**

Band literature suitable to various types of bands – concert and popular; arrangements and compositions as related to the needs of studio, radio, and television work; related activities.
Prerequisite: Ability to be determined by director.

(5 semester periods)

1608-1612 ORGAN

1609 **Organ – Beginning**

Basic keyboard and pedalboard techniques; note reading; keyboard harmony; playing of compositions suitable to the beginning stage of learning.

(5 semester periods)

1613-1619 PIANO

1614.1 **Piano – Beginning**

Basic knowledge of the keyboard; development of manual dexterity at the keyboard; note reading; recognition of melodic figures; harmonic figures and rhythm motifs; tone production; chord building; use of pedal interpretation of simple compositions.

(10 semester periods)

1614.2 **Piano – Intermediate**

Development of technique, expression, dexterity, variety of touch, and passage playing; interpretation of compositions more advanced than in previous course.

(10 semester periods)

1614.3 **Piano – Advanced**

Piano repertoire; modern and classical compositions; preparation for commercial playing; popular types of compositions and rhythms; accompanying vocal and instrumental soloists and ensembles.

(10 semester periods)

1620-1629 THEORY

1621.1 **Fundamentals of Music 1**

Sight singing and tone hearing; scale construction; key signatures; time and rhythm practice; major and minor modes; simple song dictation.

(5 semester periods)

SUBJECT NO.

1621.2 **Fundamentals of Music 2**

Continuation of Fundamentals of Music 1; sight reading of all types of musical compositions; music dictation; intensive study of sight singing and listening skills.
Prerequisite: Fundamentals of Music 1.

(5 semester periods)

1623 **Harmony**

Theory and practice of music notation; all types of chords and their relationships; harmonization of melodies; diatonic harmonies; simple chromatic alterations; chromatic harmonies; modulation; beginning work in scoring and creative compositions.
Prerequisite: Fundamentals of Music 1, or equivalent.

(10 semester periods)

1625 **Music Composition**

Construction, development, and style of original music composition; scoring and arranging instrumental and vocal compositions.
Prerequisite: Harmony, or equivalent.

(5 semester periods)

1627 **Music Arranging**

Musical penmanship; part copying; score extractions; transposing.

(5 semester periods)

1630-1639 VOCAL

1631.1 **Voice 1 – Fundamentals of Singing**

Basic musicianship; breath support; tone production; diction; physical and mental aspects of singing; qualities of tone and their uses; practice of vocal embellishments and other related exercises; song literature suitable to the beginning phase of vocal development; part singing.

(5 semester periods)

1631.2 **Voice 2 – Advanced**

Continuation of Fundamentals of Singing; repertoire and advanced vocalizing suitable to this phase of vocal cultivation; part singing.
Prerequisite: Voice 1 – Fundamentals of Singing, or equivalent, to be determined by the instructor.

(5 semester periods)

1633 **Song Coaching and Recital Practice**

Repertoire building; phrasing; diction; application of dynamic and dramatic notations; stage deportment; microphone techniques for radio, television, and related activities.
Prerequisite: Audition.

(5 semester periods)

1635 **Chorus**

Choral literature; tonal blend and phrasing; following the director; time and rhythm practice; ensemble singing as related to current radio, television, and studio demands; a cappella choir.
Prerequisite: Ability of students to benefit from course to be determined by director.

(5 semester periods)

SUBJECT NO.

1637 **Opera and Operetta Workshop**

Production of operas and operettas; stage management and direction.
Prerequisite: Audition.

(5 semester periods)

1640-1649 MUSIC, GENERAL

1641 **Music Appreciation**

Music history and literature; classic, romantic, and modern styles; opera; operetta, folkmusic, art songs, and concert music; forms of commercial music; listening to music.

(5 semester periods)

1643 **Music Conducting**

Use of the baton; basic time and rhythm patterns; study and practice of materials suited for choral and instrumental ensembles.
Prerequisites: Sufficient musical background to be determined by instructor.

(5 semester periods)

1645 **Workshop in Modern Music**

Improvement of individual and group instrumental techniques; methods of organizing and marketing professional modern music performances.
Prerequisites: Basic instrumental and/or vocal ability to be determined by instructor.

(10 semester periods)

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